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1	<b>PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report</b>			
2	<b>Country:</b>	BANGLADESH		
3	<b>Reporter:</b>	Jon Epstein (epstein@ecohealthalliance.org); Emily Hagan (hagan@ecohealthalliance.org)		
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5	<b>IEE Activity 1: Procurement, storage, management, and disposal of public health commodities</b>			
6	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	<b>Lab and Field: Complete</b> - MSDS sheets have been reviewed and signed by all relevant personnel; product disposal trainings have been conducted and documented; copies of all master documents are held in a master binder.	Limited number of field staff need to review MSDS, based on product use.
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	<b>Lab: Complete</b> - Guidelines have been provided and training conducted, cold chain and supply are functioning and documented. <b>Field site: Complete</b> - In-field cold chain equipment was thoroughly inventoried and inspected in August, 2015; trainings have been conducted and completed for all field staff; training documentation for all sites are maintained locally and in the central PREDICT training database. Staff is trained on proper collection, transportation and storage of specimens/products using current PREDICT-2 protocols for cold chain and supply chain management.	All trainings up to date on current PREDICT-1 and PREDICT-2 protocols.
9	1.3	Provide PREDICT and EGSSAA guidelines and conduct trainings on disposal of all public health commodities (e.g., reagents, chemicals, drugs, etc.); ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>All sites: Complete</b> - Trainings have been conducted and documented for most relevant staff; copies of all master documents are held in a master binder and at all sites locally. Guidelines were provided and are in use by personnel; and training records are available on EIDITH. Field staff are trained on proper biosafety measures related to the handling of sharps and disposal of hazardous medical waste according to PREDICT-2 protocols, EGSSAA and WHO guidelines. Trainings are documented in the EIDITH database.	
10	<b>IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste</b>			
11	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>

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6	<b>Remarks</b>
7	As per institutional policy all laboratory personnel are informed regarding all MSDS sheets; all training documents maintained by icddr,b and IEDCR biosafety department and are regularly monitored for updates. Personnel involved in PREDICT receive additional training on PREDICT protocols. Refresher training with PREDICT-2 protocols and trainings on newly released guidelines are given when appropriate.
8	Personnel involved in PREDICT receive additional training on PREDICT protocols.
9	All laboratory personnel and personnel handling biological agents and/or animals received annual training in Biosafety and Biosecurity, Occupational Health and Safety and Blood borne pathogens. Personnel involved in PREDICT receive PREDICT-specific protocol trainings as well.
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11	<b>Remarks</b>



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12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	<b>All sites: Complete-</b> Trainings have been conducted and documented for most relevant staff across sites; all original, master documents are maintained locally with all PREDICT trainings reported to the central database. PREDICT staff have been trained to handle medical waste according to manufacturer guidelines or in compliance with WHO and PREDICT guidelines. Medical waste is stored and disposed of following manufacturer guidelines or in compliance with WHO, EGSSAA and PREDICT guidelines.	All trainings up to date on current PREDICT-1 and PREDICT-2 protocols.
13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., <i>the E M&amp;M Tool - Action Plan</i> ).	<b>All sites: Completed-</b> Trainings have been conducted and documented for most relevant staff; all original, master documents are maintained locally with all PREDICT trainings reported to the central database. Trainings conducted using relevant eBook modules of PREDICT2; EM&M Tool-Action Plan is completed annually.	All trainings up to date on current PREDICT-1 and PREDICT-2 protocols.
14	2.3	Provide PREDICT, EGSSAA, and WHO guidelines and conduct trainings in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	<b>All sites: Completed</b> - Trainings have been conducted and documented for most relevant staff; all original, master documents are maintained locally, trainings are conducted using relevant eBook modules of PREDICT2 and PREDICT trainings reported to the EIDITH database.	
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			
16	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
17	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	<b>Completed</b> - Copies of US IACUC and local protocols and permissions for animal sampling maintained and reviewed by all staff, and relevant trainings conducted; all original, master documents are maintained locally, with all PREDICT trainings reported to the EIDITH database; copies of the US and local IRBs are maintained and reviewed by staff and relevant trainings conducted. All IRB protocols are available; IACUC 101 training has been completed by all field staff; country-level animal ethical approvals and permits were obtained prior to PREDICT2 implementation.	

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12	As per institutional policy all laboratory personnel at icddr,b and IEDCR are monitored by the biosafety department for the proper disposal of medical waste. Personnel involved in PREDICT receive additional training on PREDICT protocols.
13	As per institutional policy, all laboratory personnel are trained locally regarding handling sharps and hazardous waste disposal, the documents are maintained by icddr,b and IEDCR biosafety department and are regularly monitored for updates. Personnel involved in PREDICT receive additional training on PREDICT protocols.
14	All laboratory personnel and all personnel handling biological agents and/or animals received annual training in Biosafety and Biosecurity, Occupational Health and Safety and Blood borne pathogens by their laboratory affiliations. Personnel involved in PREDICT receive additional training on PREDICT protocols as well.
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16	<b>Remarks</b>
17	IRB for qualitative research is approved and training completed. Local IRB protocols for human biological sampling is approved and training is completed or ongoing for relevant staff.

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18	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	<b>Completed</b> - PREDICT 2 guidelines and protocols have been provided; associated trainings have been conducted. Appropriate staff have been trained on the PREDICT-2 protocols related to humane animal capture, handling and sample acquisition, and safe human sampling.	
19	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	<b>Field: Completed</b> - Original copies of all required permits for animal sampling are maintained onsite with copies available for review. All required permissions for animal and human sampling have been obtained for PREDICT 2 <b>Lab: Completed</b> - Permissions are in place for testing of animal samples including export permits to send samples to reference labs. All ethical permissions for human sampling have been obtained.	
20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			
21	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for environmental impacts and outbreak response in training materials.	<b>Continuing</b> - Training has been conducted using PREDICT 2 e-books training models. The PREDICT-2 Country Coordinator meets regularly with the IEDCR One Health secretariat, is involved in the establishment of the One Health Platform along with the EPT-2 partner P&R. PREDICT held a meeting with the National Outbreak response team through the National One Health platform, including the Department of Forest; surveillance and sampling sites are shared with all relevant in-country partners.	PREDICT will address issues of sensitive species and habitats in event of project involvement in outbreak response activities with Ministry partners as appropriate.
23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	<b>Completed</b> - PREDICT has engaged in several outbreak response activities at the country-level. The team has been trained using available protocols and guides prior to the initiation of outbreak response support and/or provision of technical assistance.	
24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Completed</b> - PREDICT personnel are trained in the required project protocol available through the eBook. Trainings have been completed and all trainings are documented in the EIDITH database; EGSSAA, and Sphere Handbook guidelines have been made available for review.	

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18	IRB for biological research is approved
19	Permits not required for human sampling as PREDICT is working with the Institute of Epidemiology, Disease Control and Research, Government of Bangladesh (GOB). The PREDICT team is following the PREDICT 2 IRB protocols and new guidelines.
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21	<b>Remarks</b>
22	GOB partners have their own outbreak response protocol and guidelines. To increase the GOB capacity and protocols in place, PREDICT has been asked to train a new Rapid Response team that will respond to future outbreaks.
23	GOB partners have their own outbreak response protocol and guidelines. PREDICT will provide supportive training for the newly formed Rapid Response Outbreak team.
24	GOB partners have their own outbreak response protocol and guidelines. PREDICT will provide supportive training for the newly formed Rapid Response Outbreak team.

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1	<b>PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report</b>			
2	<b>Country:</b>	CAMBODIA		
3	<b>Reporter:</b>	Tracey Goldstein (tgoldstein@ucdavis.edu); Lucy Keatts ( )		
4				
5	<b>IEE Activity 1: Procurement, storage, management, and disposal of public health commodities</b>			
6	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	<b>IPC Lab: Complete</b> - MSDS sheets have been reviewed by all relevant personnel; product disposal trainings have been conducted and documented; copies of all master documents are held in a master binder. All trainings up to date on PREDICT-1 and PREDICT-2 protocols.	All trainings up to date on current PREDICT-1 and PREDICT-2 protocols; Updated training will be ongoing if new materials become available.
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	<b>IPC Lab: Complete</b> - Trainings conducted and documented for all staff. All trainings up to date on PREDICT-1 and PREDICT-2 protocols.	All trainings up to date on current PREDICT-1 and PREDICT-2 protocols. Updated training will be ongoing if new materials become available.
9	1.3	Provide PREDICT and EGSSAA guidelines and conduct trainings on disposal of all public health commodities; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>IPC lab: Complete</b> - Trainings have been conducted and documented for all relevant staff. Copies of all master documents are held in a master binder and at all sites locally with all PREDICT trainings reported to the central database. All trainings previously up to date on PREDICT-1 and PREDICT-2 protocols.	All trainings up to date on current PREDICT-1 and PREDICT-2 protocols. Updated training will be ongoing if new materials become available.
10	<b>IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste</b>			
11	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	<b>IPC Lab: Complete</b> - Trainings have been conducted and documented for all relevant staff across sites; All original, master documents are maintained locally with all PREDICT trainings reported to the central database. All trainings up to date on PREDICT-1 and PREDICT-2 protocols.	All trainings up to date on current PREDICT-1 and PREDICT-2 protocols. Updated training will be ongoing if new materials become available.
13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., <i>the E M&amp;M Tool - Action Plan</i> ).	<b>IPC lab: Complete</b> - Trainings have been conducted and documented for all relevant staff. All original, master documents are maintained locally with all PREDICT trainings reported to the central database. All trainings up to date on PREDICT-1 and PREDICT-2 protocols.	All trainings up to date on current PREDICT-1 and PREDICT-2 protocols. Updated training will be ongoing if new materials become available.

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14	2.3	Provide PREDICT, EGSSAA, and WHO guidelines and conduct trainings in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	<b>IPC lab: Complete</b> - Trainings have been conducted and documented for all relevant staff. All original, master documents are maintained locally with all PREDICT trainings reported to the central database. All trainings up to date on PREDICT-1 and PREDICT-2 protocols.	All trainings up to date on current PREDICT-1 and PREDICT-2 protocols. Updated training will be ongoing if new materials become available.
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			
16	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
17	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	<b>IPC: Ongoing</b> - Copies of IACUC protocols and local permission for animal sampling maintained and reviewed by all staff and relevant trainings conducted; All original, master documents are maintained locally with all PREDICT trainings reported to the central database; Approval for amendments to local IRB obtained. Copies of local IRB protocol and local permission for human sampling are maintained and reviewed by all staff and all relevant trainings have been completed by appropriate project personnel.	Annual review and renewal of UC Davis IRB in process and any amendments will be noted and new documentation maintained. Any amendments to local IRB will be submitted appropriately.
18	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	<b>IPC: Ongoing</b> - Copies of PREDICT guidelines and protocols for humane, ethical and biologically safe human sampling and animal capture; handling and sample acquisition have been translated into Khmer language and distributed to all project staff; government counterparts and students associated with the project and relevant classroom, laboratory and field-based training of these persons has been conducted.	All trainings up to date.
19	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	<b>IPC: Ongoing</b> - Copies of IACUC protocols and local permission for animal sampling maintained and reviewed by all staff and relevant trainings conducted; All original, master documents are maintained locally with all PREDICT trainings reported to the central database; Approval for amendments to local IRB obtained. Copies of local IRB protocol and local permission for human sampling are maintained and reviewed by all staff and all relevant trainings have been completed by appropriate project personnel.	Should any amendments to local permissions for further testing of animal or human samples be required, they will be submitted to the relevant local review board for approval and approved amended documents will be maintained.
20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			
21	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>

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22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for project personnel in environmental impacts and outbreak response in training materials.	<b>IPC: Ongoing</b> - Meetings held monthly with Zoonotic Technical Working Group which includes the Forestry Administration (FA) and Wildlife Conservation Society (WCS); Surveillance and sampling sites shared with all relevant in-country partners and sampling conducted in partnership with the FA.	PREDICT Outbreak assistance training was conducted for project staff and partners in January 2017; PREDICT will address issues of sensitive species and habitats in event of project involvement in outbreak response activities with Ministry partners as appropriate.
23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	<b>IPC: Ongoing</b> - Meetings held monthly with zoonotic Technical Working Group which includes the Forestry Administration and WCS; Surveillance and sampling sites shared with all relevant in-country partners and sampling conducted in partnership with the FA..	PREDICT Outbreak assistance training was conducted for project staff and partners in January 2017.
24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>IPC: Ongoing</b> - All available guidelines provided with trainings conducted albeit using PREDICT-1 materials as new training protocols recently completed; PREDICT has not been engaged in outbreak response activities to date.	PREDICT Outbreak assistance training was conducted for project staff and partners in January 2017; EGSSAA and Sphere Handbook guidelines will be made available for review.

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1	<b>PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report</b>			
2	<b>Country:</b>	CAMEROON		
3	<b>Reporter:</b>	Dave Mclver (dmciver@metabiota.com); Karen Saylors (ksaylors@metabiota.com)		
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5	<b>IEE Activity 1: Procurement, storage, management, and disposal of public health commodities</b>			
6	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	<b>Complete:</b> Chemical storage and disposal is in compliance with manufacturers' guidelines for lab and field teams. MSDS folders and sheets are available in each laboratory for available chemicals. Specific MSDS briefings for new products held and documented. MSDS binders are regularly updated and documented.	
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	<b>Complete:</b> Training of staff in cold chain using PREDICT-2 protocol to ensure proper collection, transportation and storage of specimens/products undertaken and documented; supply chain management refresher training planned. New staff are trained upon integration and training is documented.	
9	1.3	Provide PREDICT and EGSSAA guidelines and conduct trainings on disposal of all public health commodities; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Complete:</b> Laboratory management and PREDICT-2 biosafety training conducted and documented for all staff. EGSSAA guidelines distributed and used to update SOPs. Implementation of guidelines documented.	
10	<b>IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste</b>			
11	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	<b>Complete:</b> Staff have been trained in relevant PREDICT-2 protocol; all biohazardous waste stored in sealed containers while awaiting collection by contractor adhering to proper handling and storage guidelines; contractor provides documentation for pickup of waste. WHO and EGSSAA guidelines kept in binder and available to staff. Waste register and waste collection documentation in place.	

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13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., <i>the E M&amp;M Tool - Action Plan</i> ).	<b>Complete:</b> All staff trained in PREDICT biosafety protocol for handling of sharps and in generation/disposal of hazardous medical waste; the Healthcare Waste Management Minimum Program Checklist and Action Plan/E M&M Tool - Action Plan completed. Waste register and Waste collection documentation are in place.	
14	2.3	Provide PREDICT, EGSSAA, and WHO guidelines and conduct trainings in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	<b>Complete:</b> All staff trained in PREDICT biosafety protocol for handling of sharps and in generation/disposal of hazardous medical waste; EGSSAA guidelines distributed; trainings documented. A waste register and waste collection documentation are in place.	
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			
16	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
17	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	<b>Complete:</b> Copies of IACUC protocols are available to field staff; trainings in safe and ethical animal sampling undertaken during PREDICT-2, data collection staff trained by senior staff; IRB trainings undertaken by PI and senior research staff. In-country human subject research protocol approved, up to date, and available.	
18	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	<b>Complete:</b> Trainings in safe and ethical animal sampling undertaken during PREDICT-2; data collection personnel trained by senior staff; PREDICT-2 protocols available to lab and field staff; field staff have copies of approved IACUC protocols. <b>Complete:</b> Human data collection staff have been trained by PI and senior research staff on IRB trainings. In-country human subject research permissions has been granted and kept up to date.	
19	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	<b>Complete:</b> Copies of current research, wildlife and human ethical clearance permits maintained in field and staff offices and in field kits.	
20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			
21	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>

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22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for project personnel in environmental impacts and outbreak response in training materials.	<b>Complete:</b> Current staff include wildlife experts covering multiple species. Ministry responsible for wildlife and for environment are included in partner meetings, field work and in outbreak response committees and approve research permits. Previous trainings have included responsibilities and sensitivities related to bushmeat and wildlife in the field. Field data collection staff have been trained on bushmeat.	
23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	<b>Complete:</b> Outbreak response training based on PREDICT-2 guidelines has been completed by key in-country staff and is documented. Key staff have trained other technical and support staff in outbreak response according to PREDICT-2 protocol.	
24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Complete:</b> Trainings conducted using PREDICT-2 materials. EGSSAA guidelines distributed. Sphere Handbook available in lab and field safety binder. PREDICT-2 outbreak response guide available for field, lab and human research teams; teams have completed their quizzes and completion is documented in EIDITH.	

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22	PREDICT will address issues of sensitive species and habitats in event of project involvement in outbreak response activities with ministry partners as appropriate.
23	New staff are trained by key senior staff immediately as they are integrated.
24	Staff will follow guidelines and ensure training for management and disposal of solid and medical waste during outbreaks according to the procedures outlined in IEE activities 1 and 2 as in non-outbreak situations.

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1	<b>PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report</b>			
2	<b>Country:</b>	CHINA		
3	<b>Reporter:</b>	EHA: Peter Daszak (daszak@ecohealthalliance.org); Hongying Li (li@ecohealthalliance.org)		
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5	<b>IEE Activity 1: Procurement, storage, management, and disposal of public health commodities</b>			
6	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	<b>Complete</b> -- Regular reviews and updates on the MSDSs; -- Regular inspection and maintenance of products storage in compliance with MSDS recommendations, and manufacturer guidelines; -- Semi-annual training meetings conducted among personnel who handle products; -- A biosafety binder is on site with up-to-date documentation of recommended measures for procurement and storage of commodities	
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	<b>Complete</b> -- Semi-annual training meetings conducted all relevant PREDICT guidelines including; mandatory <i>Safety Guide to Laboratory Operations</i> and <i>Implementing a Cold Chain for Safe Sample Storage</i> among all laboratory and field team members; -- Training record is updated and maintained by country coordinator	
9	1.3	Provide PREDICT and EGSSAA guidelines and conduct trainings on disposal of all public health commodities; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Complete</b> -- Regular trainings conducted on PREDICT guidelines for disposal of commodities; -- A biosafety binder is on site with up-to-date documentation of recommended measures for disposal of commodities	
10	<b>IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste</b>			
11	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	<b>Complete</b> -- Local institutional policy is in compliance with WHO, EGSSAA and PREDICT guidelines for medical waste storage and disposal with maintained documentation; -- Medical waste is stored and disposed of following manufacturer guidelines with up-to-date documentation	



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6	<b>Remarks</b>
7	All project staff completed trainings up to date on current PREDICT-2 protocols
8	All project staff completed trainings up to date on current PREDICT-2 protocols
9	All project staff completed trainings up to date on current PREDICT-2 protocols
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11	<b>Remarks</b>
12	Regular trainings are provided to project staff on PREDCT guidelines and newly released guidelines in timely manner

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13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., the <i>E M&amp;M Tool - Action Plan</i> ).	<b>Complete</b> -- Regular trainings have been implemented among all project staff on PREDICT guidelines; -- Semi-annual inspections are implemented by in-country coordinator using recommended E M&M Action Plan; -- Documentation of measurement implementation and staff training is updated and maintained	
14	2.3	Provide PREDICT, EGSSAA, and WHO guidelines and conduct trainings in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	<b>Complete</b> -- Local institutional policy is implemented in compliance with PREDICT guidelines -- Trainings conducted for all field staff using relevant PREDICT guidelines with maintained documentation	
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			
16	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
17	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	<b>Complete</b> -- Global and China country-level IACUC and IRB protocols were obtained prior to PREDICT2 implementation; -- IRB and IACUC protocols have been maintained on site, and reviewed by all staff, trainings have been conducted on PREDICT guidelines	
18	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	<b>Complete</b> -- Regular trainings have been conducted using relevant PREDICT guidelines with up-to-date documentation -- Relevant trainings conducted in animal and human surveillance teams with maintained documentation	
19	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	<b>Complete</b> -- All required permissions for animal and human sampling, as well as trainings among project staff are being updated and maintained regularly with documentation	
20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			
21	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>

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13	Regular trainings are provided to project staff on PREDCT guidelines and newly released guidelines in timely manner
14	Regular trainings are provided to project staff on PREDCT guidelines and newly released guidelines in timely manner
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16	<b>Remarks</b>
17	-- Annual review of IRBs and IACUC implemented;
18	-- All project staff completed trainings up to date on current PREDICT 2 protocols for ethics and safe sampling
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21	<b>Remarks</b>

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22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for project personnel in environmental impacts and outbreak response in training materials.	<b>Ongoing</b> -- Training and regular meetings have been implemented with different research groups and stakeholders, using PREDICT 2 guidelines, but have not engaged in outbreak response activities to date	
23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	<b>Ongoing</b> -- Regular trainings have been conducted among all project staff on PREDICT guidelines; -- Copies of PREDICT and EGSSAA guidelines are maintained on site	
24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Ongoing</b> -- Trainings have been implemented with updated documentation	

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22	All project staff completed trainings up to date on current PREDICT-2 protocols
23	All project staff completed trainings up to date on current PREDICT-2 protocols
24	All project staff completed trainings up to date on current PREDICT-2 protocols

	A	B	C	D
1	<b>PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report</b>			
2	<b>Country:</b>	COTE d'IVOIRE		
3	<b>Reporter:</b>	Kalpy Julien COULIBALY [REDACTED];		
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5	<b>IEE Activity 1: Procurement, storage, management, and disposal of public health commodities</b>			
6	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	<b>Complete:</b> MSDS sheets are stored in a master binder in the laboratory, available to all staff; products are handled, stored and disposed of according to MSDS and in compliance with national guidelines. PREDICT team members are encouraged to read carefully the recommendation sheets of each new material and reagent delivered before use it.	All trainings are up to date on current PREDICT-1 and PREDICT-2 protocols; Updated training will be ongoing as new materials become available.
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	<b>Complete:</b> PREDICT trainings conducted and certified ; packing and shipping, cold chain and supply chain management as well as guidelines were provided. PREDICT uses liquid nitrogen dry-shippers and -80C portable freezer for the field component and from transfer from the field to the laboratory. Predict members are trained and informed on the importance to maintain and respect Cold chain and EPI required when handling NH2I. Different meeting and workshop about the supply chain management have been carried out in 2018.	All trainings are up to date on current PREDICT-1 and PREDICT-2 protocols; Updated training will be ongoing as new materials become available. An additional training on supply chain management would be useful.
9	1.3	Provide PREDICT and EGSSAA guidelines and conduct trainings on disposal of all public health commodities; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Complete:</b> PREDICT trainings conducted and documented for handling and disposal of waste; guidelines provided. IPCI have got an incinerator that allows destroying the infectious waste. Lanada also has an incinerator offered by FAO that is currently functional and used for waste destruction. In the field, PREDICT helped to destroy wastes daily by providing fuel to Bonon's CSU where a hole is used to burn the waste. The biohazard wastes produced by the animal team in the villages are collected in the securely bags. Then, there were transferred to the hospital of Bonon to be destroyed in the hole created for this purpose.	Staff to review EGSSAA guidelines relevant to disposal of public health commodities.
10	<b>IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste</b>			
11	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>

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12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	PREDICT training conducted , certified and documented for medical waste; guidelines provided and in situ training too. In each PREDICT site a trained person is identified to follow the appropriate WHO, EGSSAA guidelines and PREDICT SOPs on waste management and biosafety in the field.	Working to establish a complete documentation system for storage and disposal of waste. <b>IPCI and LANADA</b> already have a complete documentation system for storage and disposal of waste.
13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., <i>the E M&amp;M Tool - Action Plan</i> ).	PREDICT training conducted, certified and documented for handling of sharps and hazardous waste; guidelines provided and in situ training too (field concurrent clinic included); waste eliminated according to PREDICT SOPs; EM&M Tool - Action Plan completed by IPCI and LANADA	Working to establish a complete documentation system for storage and disposal of waste in all institutions involved in PREDICT activities and all PREDICT sites.
14	2.3	Provide PREDICT, EGSSAA, and WHO guidelines and conduct trainings in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	PREDICT training conducted , certified and documented for in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; guidelines provided and in situ training too. In each PREDICT site a trained person is identified to follow the appropriate WHO, EGSSAA guidelines and PREDICT SOPs on waste management and biosafety in the field.	Documentation of implementation of guidelines maintained in-country.
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			
16	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
17	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	<b>Complete:</b> IACUC approvals and in-country animal sampling permissions received; field staff trained in ethical and safe sampling and animal handling protocols; theoretical trainings documented and certified and in situ training provided and completed.	Renewal of expired authorizations is completed. PREDICT CIV have updated authorizations.
18	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	<b>Complete:</b> Guidelines provided; trainings in PREDICT protocol for safe animal capture, handling, and sampling , and for human sampling conducted, certified and documented.	



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19	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	<b>Complete:</b> Original copies of all required permits for animal sampling are maintained on site. Qualitative Research IRB and in-country human subjects research permissions received for the human behavioral study. Renewal or extension of authorizations is completed and relevant staff have been trained.	Renewal or extension of authorizations is currently being processed for FY5
20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			
21	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for project personnel in environmental impacts and outbreak response in training materials.	<b>Complete</b> - Workshop and simulation exercises have been conducted with stakeholders in case of outbreak to identify gaps in response system - sensitivity training to be included in future discussions. An emergency operations center has been set up (based on national Ebola response readiness plan). Semi-annual meeting are organized to discuss about outbreak detection and response. PREDICT outbreak assistance and response capacity and emergency preparedness has been presented and commented on by multiple stakeholders during trainings and workshops.	PREDICT address regularly his reports to the Technical secretariat of the GHSA in CIV to inform the partners of health system if the situation in the field. PREDICT and the others USAID Partners have met authorities in charge of environment, agriculture, water and forestry health issues in the country to discuss about outbreak planning.
23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	<b>Complete</b> - Workshop and simulation exercises have been conducted. Staff recruited in the beginning have completed the training in PREDICT guidelines for outbreak assistance.	The training of the new staff is ongoing.
24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	PREDICT training conducted , certified and documented for management and disposal of solid and medical waste in outbreak situations; guidelines provided. In each PREDICT site a trained person is identified to follow the appropriate EGSSAA guidelines.	The training of the news staff on these protocols and guidelines is ongoing

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23	Training have to be updated regularly to be sure that all the staff are ready. Multiple stakeholder workshops are encouraged to synchronize the response , adapt it and optimize it.
24	PREDICT participates in outbreak preparedness meetings and staff training is upgraded as needed and appropriate.

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1	<b>PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report</b>			
2	<b>Country:</b>	DEMOCRATIC REPUBLIC OF CONGO		
3	<b>Reporter:</b>	<a href="mailto:dmciver@metabiota.com">Dave Mclver (dmciver@metabiota.com)</a> ; <a href="mailto:ksaylors@metabiota.com">Karen Saylors (ksaylors@metabiota.com)</a>		
4				
5	<b>IEE Activity 1: Procurement, storage, management, and disposal of public health commodities</b>			
6	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	<b>Complete:</b> Chemical storage and disposal is in compliance with manufacturers' guidelines for lab and field teams. MSDS sheets are maintained in the laboratory; staff have been trained on PREDICT protocols prior to handling materials. Products are stored and disposed of according to manufacturer guidelines and MSDS.	
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	<b>Complete:</b> PREDICT guidelines and training documents maintained in the lab. Laboratory and field staff have been trained on cold chain and supply chain using PREDICT protocols. All trainings entered in the EIDITH platform.	
9	1.3	Provide PREDICT and EGSSAA guidelines and conduct trainings on disposal of all public health commodities; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Complete:</b> All staff working on PREDICT (laboratory, field and at hospitals) completed trainings in PREDICT-2 protocols with trainings documented; EGSSAA guidelines available to staff.	
10	<b>IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste</b>			
11	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	<b>Complete:</b> training has been conducted using PREDICT-2 guidelines; guidelines maintained in the lab for proper handling and disposal of medical waste. Collaborating human health facilities: Complete - staff of the two collaborating health facilities have been trained on relevant PREDICT-2 protocols prior to human sampling, trainings documented; guidelines available to laboratory and field staff.	

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13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., the <i>E M&amp;M Tool - Action Plan</i> ).	<p><b>Complete:</b> laboratory and field sites maintain PREDICT guidelines for handling sharps and disposal of hazardous medical waste at facilities; field and lab personnel trained using PREDICT-2 guidelines/protocols; E M&amp;M Tool - Action Plan completed.</p> <p><b>Complete:</b> partner health facilities received PREDICT guidelines and have been trained on handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste prior to human sampling activities. The team had working sessions, inspection visits and made recommendations that have been followed. Complete: documentation available for waste storage and disposal.</p>	
14	2.3	Provide PREDICT, EGSSAA, and WHO guidelines and conduct trainings in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	<p><b>Complete:</b> laboratory and field sites maintain PREDICT guidelines. Field and lab personnel trained using PREDICT-2 guidelines/protocols. Complete: partner health facilities provided with PREDICT protocols and guidelines; guidelines and training provided prior to human sampling in selected sites, and refresher trainings completed as required.</p>	
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			
16	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
17	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	<p><b>Complete:</b> IACUC approvals and in-country animal sampling permissions received; field staff trained in ethical and safe sampling and animal handling protocols; trainings documented.</p> <p>Complete: all hospital staff working for PREDICT trained in IRB protocols and ethics for research using human subjects, and all training is documented.</p>	
18	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	<p><b>Complete:</b> all staff have been trained on relevant PREDICT-2 protocols, all trainings have been documented. The approval of the standardized protocol for human subjects has been renewed in DRC and in the US. Local permission granted for animal sampling in two provinces; original permits kept locally.</p>	

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19	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	<b>Complete:</b> Original permits for animal sampling maintained on site with copies available for review and available in the field. Qualitative human subjects research IRB and in-country permissions received for the human behavioral study. IRB approval received for human syndromic surveillance in hospitals, and renewed as required.	
20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			
21	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for project personnel in environmental impacts and outbreak response in training materials.	<b>Complete:</b> PREDICT participated in several meetings organized within the framework of One Health where the delegates of several governmental structures (Ministry of Agriculture, Fisheries and Livestock, Ministry of the Environment, etc.) and non-governmental partners (FAO, WHO, etc....); discussions centered around plans and considerations for research into the reservoir of the Ebola virus.	
23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	<b>Complete:</b> Trainings on relevant PREDICT-2 protocols completed and documented. Complete: EGSSAA and Sphere Handbook guidelines are available for review.	
24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Complete:</b> Trainings on outbreak response and other relevant PREDICT-2 protocols completed and documented. All associated hospital and clinical staff have been appropriately trained in waste management and hazardous materials handling. All hazardous waste generated is managed, stored, and disposed of according to appropriate regulations.	



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21	<b>Remarks</b>
22	PREDICT will address issues of sensitive species and habitats in event of project involvement in outbreak response activities with ministry partners as appropriate.
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1	<b>PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report</b>			
2	<b>Country:</b>	EGYPT		
3	<b>Reporter:</b>	William Karesh (karesh@ecohealthalliance.org); Patrick Dawson (dawson@ecohealthalliance.org)		
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5	<b>IEE Activity 1: Procurement, storage, management, and disposal of public health commodities</b>			
6	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	<b>Complete:</b> MSDS Sheets are on site and are also available through the Biosafety Committee of the Egypt National Research Centre (NRC).	All trainings on up to date on current PREDICT-1 and PREDICT-2 protocols; Updated training will be ongoing as new materials become available.
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	<b>Complete:</b> Training on PREDICT guidelines for cold chain and supply chain management provided to all personnel.	All trainings on up to date on current PREDICT-1 and PREDICT-2 protocols; Updated training will be ongoing as new materials become available.
9	1.3	Provide PREDICT and EGSSAA guidelines and conduct trainings on disposal of all public health commodities; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Complete:</b> Training on PREDICT guidelines for handling and disposal of waste provided to all personnel.	All trainings on up to date on current PREDICT-1 and PREDICT-2 protocols; Updated training will be ongoing as new materials become available.
10	<b>IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste</b>			
11	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	<b>Complete:</b> Disposal of waste is performed per the guidelines of the Biosafety Committee at NRC and in compliance with PREDICT protocols. Waste is autoclaved prior to leaving the lab for disposal.	
13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., <i>the E M&amp;M Tool - Action Plan</i> ).	<b>Complete:</b> Training on PREDICT guidelines provided to all personnel. Handling of sharps and hazardous waste is per the guidelines of the Biosafety committee at the NRC.	

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14	2.3	Provide PREDICT, EGSSAA, and WHO guidelines and conduct trainings in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	<b>Complete:</b> Training on PREDICT guidelines provided to all personnel. Disposal of sharps and hazardous waste is per the guidelines of the Biosafety committee at the NRC.	
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			
16	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
17	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	<b>Complete:</b> Human protocols approved by UCD IRB and NRC Medical Research Ethics Committee. Animal protocol approved by NRC Ethics Committee. All staff involved in human research have completed human subjects research training per the IRB and all staff involved in animal research have completed IACUC training. All staff have taken the related PREDICT training. Records of training completions are maintained, as well as records of all ethical approvals.	
18	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	<b>Complete:</b> Training was provided to all personnel. Records of quizzes to demonstrate training module competency are maintained.	All trainings on up to date on current PREDICT-1 and PREDICT-2 protocols; Updated training will be ongoing as new materials become available.
19	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	<b>Complete:</b> Human protocols approved by UCD IRB and NRC Medical Research Ethics Committee. Animal protocol approved by NRC Ethics Committee. All approvals maintained and available.	
20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			
21	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for project personnel in environmental impacts and outbreak response in training materials.	PREDICT Egypt is designated as limited engagement; outbreak assistance is not within the scope of the project though PREDICT will address outbreak response activities with ministry partners as appropriate. Project staff have been trained on PREDICT response protocols.	

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22	PREDICT will address issues of sensitive species and habitats in event of project involvement in outbreak response activities with ministry partners as appropriate.

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23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	PREDICT Egypt is designated as limited engagement; outbreak assistance is not within the scope of the project though PREDICT will address outbreak response activities with ministry partners as appropriate. Project staff have been trained on PREDICT response protocols.	
24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	PREDICT Egypt is designated as limited engagement; outbreak assistance is not within the scope of the project though PREDICT will address outbreak response activities with ministry partners as appropriate. Project staff have been trained on PREDICT response protocols.	

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1	<b>PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report</b>			
2	<b>Country:</b>	ETHIOPIA		
3	<b>Reporter:</b>	Yohannes Negash ( )		
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5	<b>IEE Activity 1: Procurement, storage, management, and disposal of public health commodities</b>			
6	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	<b>Complete:</b> MSDS sheets have been updated and reviewed by all staff; copies of all master documents are held in a master binder at PREDICT-2 Lab at Addis Ababa University (AAU) Akilu lemma Institute of pathobiology(ALIPB) and Influenzas Lab at Ethiopian Public Health Institute(EPHI). Products are stored and disposed of according to MSDS. All basic lab safety, biosafety and PPE trainings have been conducted to date on PREDICT-2 protocols prior to handling materials including for new staff joined the team recently.	Copies of MSDS sheets for new products will continue to be added in master binder. Supplementary trainings to be updated as new PREDICT protocols release of the e-book by the PREDICT capacity team.
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	<b>Complete:</b> Training provided to all PREDICT-2 personnel regarding field cold chain equipment management and regularly inspection using PREDICT-2 protocols.	All trainings on up to date on current PREDICT-1 and PREDICT-2 protocols; Updated training will be ongoing as new materials become available.
9	1.3	Provide PREDICT and EGSSAA guidelines and conduct trainings on disposal of all public health commodities; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Complete:</b> Trainings conducted regarding biosafety including disposal of public health commodities using available PREDICT-2 protocols and documented for all staff; field cold chain equipment thoroughly inventoried and inspected. Copies of master training documents are held in a master binder and entered in the central database.	All trainings on up to date on current PREDICT-1 and PREDICT-2 protocols; Updated training will be conducted with all staff as new materials become available.
10	<b>IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste</b>			
11	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	<b>Complete:</b> Trainings have been conducted prior to handling medical waste and documented for all relevant staff using the PREDICT-2 protocols; all documents are maintained at PREDICT-2 Lab at Addis Ababa University (AAU) Akilu lemma Institute of pathobiology(ALIPB) and Influenzas Lab at Ethiopian Public Health Institute(EPHI).	Training will be ongoing as new training materials are made available by the PREDICT team.

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13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., <i>the E M&amp;M Tool - Action Plan</i> ).	<b>Complete:</b> All staff trained using PREDICT-2 protocols for biosafety training for handling of sharps and in generation/disposal of hazardous medical waste. Healthcare Waste Management Minimum Program Checklist and Action Plan is completed.	Training will be ongoing as new training materials are made available by the PREDICT team
14	2.3	Provide PREDICT, EGSSAA, and WHO guidelines and conduct trainings in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	<b>Complete:</b> All staff trained using PREDICT-2, EGSSAA, and WHO guidelines on biosafety training, and guidelines provided for reviewing; trainings documented in the training binder and entered into the central database.	Additional training materials to be made available to team for training upon release of all new and final protocols. Refresher trainings will be conducted with all staff on an annual basis.
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			
16	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
17	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	<b>Complete:</b> Copies of IACUC protocols, Ethiopian Wildlife and Conservation Authority permission for wildlife sampling and IRB approval for human biological surveillance document maintained and reviewed by all staff and relevant trainings conducted.	All trainings conducted on PREDICT-2 protocols for human syndromic surveillance, safe sampling, and animal handling.
18	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	<b>Completed:</b> Copies of IACUC protocols and local permission for human and wildlife sampling maintained and reviewed by all staff and relevant PREDICT-2 trainings conducted All original, master documents are maintained locally with all PREDICT trainings reported to the central database.	All training conducted on PREDICT ethical and safe sampling. Refresher training will be conducted when new material available.
19	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	<b>Complete:</b> Original copies of human and wildlife sampling permissions available in field staff offices and in field kits.	Human and wildlife sampling permit applications being prepared for renewal ahead of expiry at end of year.
20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			
21	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>

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18	Coordinating human surveillance activities with the Ethiopian Public Health Institute (EPHI) of the MoH.
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22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for project personnel in environmental impacts and outbreak response in training materials.	<b>Ongoing:</b> all relevant government authorities are being made aware of the objectives and scope of the PREDICT-2 project.	PREDICT outbreak assistance guide in use from PREDICT-2; trainings will be conducted when modified materials are made available.
23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	<b>Complete:</b> training provided to PREDICT-2 personnel including new staffs in outbreak assistance guide.	PREDICT outbreak assistance guide is available from PREDICT-2; protocols and guides for distribution and training will be conducted when new material are available.
24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Complete:</b> Sphere Handbook and EGSSAA guidelines made available for review. Training provided on PREDICT outbreak assistance guide and entered in the central database.	PREDICT outbreak assistance guide in use from PREDICT-2; trainings will be conducted when updated materials have been made available for review.

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1	<b>PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report</b>			
2	<b>Country:</b>	GHANA		
3	<b>Reporter:</b>	Terra Kelly (trkelly@ucdavis.edu)		
4				
5	<b>IEE Activity 1: Procurement, storage, management, and disposal of public health commodities</b>			
6	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	<b>Veterinary Services Directorate (VSD) and Noguchi Memorial Institute for Medical Research: Ongoing</b> - Laboratory personnel reviewing materials storage guidelines and MSDS sheets as products are ordered and received. Both labs store and dispose products according to manufacturer guidelines and in compliance with all WHO, EGSSAA and PREDICT guidelines.	Copies of MSDS sheets for new products will continue to be added as new products are ordered and received. Personnel will follow guidelines and ensure training for management and disposal of solid and medical waste according to manufacturer guidelines and in compliance with WHO, EGSSAA, and PREDICT guidelines.
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	<b>VSD, Wildlife Division (WD), NMIMR, Ghana Health Service (GHS) and 37 Military Hospital: Ongoing</b> - All personnel working on the PREDICT project have completed training on cold chain and supply chain management using PREDICT protocols. Clinical Refresher trainings have been conducted annually and are documented in the EIDITH database.	All trainings on PREDICT-2 protocols are up to date.
9	1.3	Provide PREDICT and EGSSAA guidelines and conduct trainings on disposal of all public health commodities; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>VSD, NMIMR, WD, GHS, and 37 Military Hospital: Completed</b> - Training of field, clinical, and laboratory personnel on biosafety and basic laboratory safety has been conducted and documented in the EIDITH database; copies of all master documents and guidelines have been made available to personnel.	
10	<b>IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste</b>			
11	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	<b>VSD, NMIMR, WD, GHS, and 37 Military Hospital: Complete</b> - Trainings in storage and handling of medical waste have been conducted and documented for personnel; Master documents and guidelines have been made available to personnel. All medical and laboratory waste is stored and disposed of according to manufacturer guidelines and in compliance with PREDICT guidelines.	

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13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., the E M&M Tool - Action Plan).	<b>VSD, NMIMR, WD, GHS, and 37 Military Hospital: Complete</b> - Trainings have been conducted and documented for personnel. Master documents and guidelines have been made available to personnel; trainings reported to the EIDITH database; E M&M Tool - Action Plan completed.	
14	2.3	Provide PREDICT, EGSSAA, and WHO guidelines and conduct trainings in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	<b>VSD, NMIMR, WD, GHS, and 37 Military Hospital: Complete</b> - Trainings have been conducted and documented for personnel using PREDICT protocols; guidelines provided to personnel for review; trainings reported to the EIDITH database.	
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			
16	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
17	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	<b>VSD, NMIMR, WD, GHS, and 37 Military Hospital: Complete</b> - Copies of IACUC protocols and Wildlife Division permission for animal sampling maintained and reviewed by personnel; field staff trained on IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols. Trainings reported to the EIDITH database. IRB protocols have been approved by IRB committees at NMIMR, GHS, and 37 Military Hospital for human biological surveillance and have also received final approval by UCD. Copies of the approved wildlife research permit, IACUC, and the three in-country IRB protocols are maintained and reviewed by personnel. Personnel provide reports to IACUC and IRB committees annually.	
18	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	<b>WD and VSD: Complete</b> - Master guidelines and protocols provided; relevant trainings conducted; trainings reported to the EIDITH database. NMIMR: Complete - CITI training of supervisors for human disease surveillance activities have been completed; trainings reported to the EIDITH database.	
19	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	<b>VSD, WD, NMIMR: Complete</b> - Original copies of permits for animal sampling, IACUC protocols, and IRB protocols are maintained onsite.	

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20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			
21	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for project personnel in environmental impacts and outbreak response in training materials.	<b>NMIMR, WD, and VSD: Ongoing-</b> The WD (Ministry of Land and Natural Resources), VSD (Ministry of Food and Agriculture), NMIMR, Ghana Health Service/Ministry of Health (GHS/MOH), and the Medical Department of the Ghana Armed Forces (Military Hospital) are all implementing partners for PREDICT in Ghana and approve surveillance activities.	Upon invitation and approval to support outbreak response activities, meetings will be held with local environmental experts, NGO's, and ministry officials as appropriate; PREDICT will address issues of sensitive species and habitats in the event of project involvement in outbreak response activities with Ministry partners as appropriate.
23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	<b>NMIMR, WD, and VSD: Completed</b> - PREDICT personnel have been completed PREDICT training on protocols for assistance in a disease outbreak.	All trainings on assistance in an outbreak are up to date; Updated training will be ongoing as new materials become available.
24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>WD, NMIMR, and VSD: Completed</b> - Guidelines made available for review; PREDICT personnel have completed training on protocols for assistance in a disease outbreak.	Personnel will follow guidelines and ensure training for management and disposal of solid and medical waste during disease outbreaks according to the procedures outlined in IEE Activities 1 and 2 as in non-outbreak situations.



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1	<b>PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report</b>			
2	<b>Country:</b>	GUINEA		
3	<b>Reporter:</b>	Corina Monagin (cmonagin@ucdavis.edu); Jaber Belkhiria (jabelkhiria@ucdavis.edu)		
4				
5	<b>IEE Activity 1: Procurement, storage, management, and disposal of public health commodities</b>			
6	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	<b>Complete:</b> MSDS for field products provided and maintained; products stored and disposed of in compliance with guidelines.	
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	<b>Complete:</b> Guidelines for cold chain and supply chain provided; PREDICT protocol trainings conducted and documented.	
9	1.3	Provide PREDICT and EGSSAA guidelines and conduct trainings on disposal of all public health commodities; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Complete:</b> Guidelines for handling and disposal of public health materials provided; PREDICT protocol trainings conducted and documented.	
10	<b>IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste</b>			
11	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	<b>Complete:</b> Guidelines provided; PREDICT protocol training conducted and documented for waste disposal; medical waste from field and lab waste taken to nearest hospital for disposal.	
13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., <i>the E M&amp;M Tool - Action Plan</i> ).	<b>Completed:</b> Guidelines provided for disposal of hazardous waste; PREDICT protocol training conducted and documented; hazardous waste from field taken to nearest hospital for disposal; EM&M Tool - Action Plan completed.	

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6	<b>Remarks</b>
7	Lab activities are ongoing at the VHF lab. PREDICT staff have been trained on how to provide and maintain product MSDS sheets.
8	All trainings are up to date on current PREDICT-1 and PREDICT-2 protocols; Updated training will be ongoing as new materials become available.
9	All trainings are up to date on current PREDICT-1 and PREDICT-2 protocols; Updated training will be ongoing as new materials become available.
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11	<b>Remarks</b>
12	Field waste storage and disposal documented.
13	Field waste storage and disposal documented.

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14	2.3	Provide PREDICT, EGSSAA, and WHO guidelines and conduct trainings in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	<b>Complete:</b> Guidelines provided; PREDICT protocol training on handling sharps and disposal of hazardous waste conducted and documented.	
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			
16	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
17	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	<b>Complete:</b> In compliance with IACUC and PREDICT protocols for ethical and safe animal handling and sampling; in-country approval granted for animal sampling; appropriate personnel completed IACUC 101 and/ or training in PREDICT guidelines, training documented.	
18	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	<b>Complete:</b> PREDICT guidelines for human sampling provided; PREDICT protocol training for animal capture, handling and sampling conducted and documented.	
19	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	<b>Complete:</b> In-country permits for animal capture, handling and sampling attained and kept on site.	
20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			
21	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for project personnel in environmental impacts and outbreak response in training materials.	<b>In progress:</b> Consideration for sensitivity training to be addressed in preparation for a potential outbreak situation.	
23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	<b>Completed</b> PREDICT outbreak assistance protocol training conducted and documented for key personnel.	
24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>In Progress:</b> Guidelines for outbreak assistance provided and to be reviewed; PREDICT protocol training in waste management conducted and documented, with ongoing outbreak assistance training in progress.	

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14	All trainings are up to date on current PREDICT-1 and PREDICT-2 protocols; Updated training will be ongoing as new materials become available.
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16	<b>Remarks</b>
17	All trainings are up to date on current PREDICT-1 and PREDICT-2 protocols; Updated training will be ongoing as new materials become available.
18	Guinea is part of the Ebola Host Project. No human biological sampling is performed.
19	Guinea is part of the Ebola Host Project. No human biological sampling is performed.
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21	<b>Remarks</b>
22	PREDICT will address sensitive species issues and habitats with ministry partners as appropriate.
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1	<b>PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report</b>			
2	<b>Country:</b>	India		
3	<b>Reporter:</b>	Ava Sullivan, (sullivan@ecohealthalliance.org), Jon Epstein (epstein@ecohealthalliance.org);		
4				
5	<b>IEE Activity 1: Procurement, storage, management, and disposal of public health commodities</b>			
6	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	<b>Ongoing:</b> Creating and updating MSDS sheets in appropriate binders for hazardous chemicals as they are procured to be used during PREDICT activities.	Newly hired staff received similar training as they are on-boarded. Complete training for additional staff conducted.
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	<b>Completed:</b> Staff trained on proper collection, transportation and storage of specimens/products using current PREDICT protocols for cold chain and supply chain management.	Newly hired staff received similar training as they are on boarded. Complete training for additional staff conducted.
9	1.3	Provide PREDICT and EGSSAA guidelines and conduct trainings on disposal of all public health commodities; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Completed:</b> Guidelines have been provided and trainings have been conducted for most relevant staff, with documentation in EIDITH, including modules on proper biosafety and laboratory management protocols using current PREDICT protocols.	Newly hired staff received similar training as they are on boarded. Complete training for additional staff conducted.
10	<b>IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste</b>			
11	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	<b>Completed:</b> All relevant staff have been trained using PREDICT biosafety training protocol, including modules on disposing of hazardous waste and PREDICT "Safety Guide to Laboratory Operations."	

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6	<b>Remarks</b>
7	All recruited staff to implement field and lab work were trained on this aspect of handling MSDS.
8	All recruited staff to implement field and lab work were trained on this aspect of handling MSDS.
9	All recruited staff to implement field and lab work were trained on this aspect of handling MSDS. conducted.
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11	<b>Remarks</b>
12	All relevant staff trained using PREDICT biosafety training protocol, including modules on disposing of hazardous waste and PREDICT "Safety Guide to Laboratory Operations."

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13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., the <i>E M&amp;M Tool - Action Plan</i> ).	<b>Completed;</b> All relevant staff have been trained using PREDICT biosafety training protocol, including modules on disposing of hazardous waste and PREDICT "Safety Guide to Laboratory Operations." Trainings that involve the use of sharps or infectious materials included a safety review regarding the safe handling and disposal of these materials. Sharps used for trainings are being collected in puncture-proof containers. Highly infectious waste is being immediately sterilized. All surveillance and laboratory personnel involved in activities that may include handling sharps or infectious waste will be required to review and sign a safety procedures sheet prior to participating in such activities.	All trainings on up to date on current PREDICT-1 and PREDICT-2 protocols; Updated training imparted.
14	2.3	Provide PREDICT, EGSSAA, and WHO guidelines and conduct trainings in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	<b>Completed:</b> Trainings have been conducted and documented for relevant staff. All staff has been informed and trained on PREDICT guidelines.	All trainings on up to date on current PREDICT-1 and PREDICT-2 protocols; Updated training imparted.
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			
16	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
17	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	<b>Completed:</b> All appropriate and relevant ethical approvals achieved for work with humans and animals. All relevant staff trained on IACUC 101 and training on ethical treatment of human subjects.	All trainings on up to date on current PREDICT-1 and PREDICT-2 protocols; Updated training will be ongoing as new materials become available.
18	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	<b>Completed:</b> All relevant staff follow PREDICT protocol on proper sampling and handling of all taxa; all relevant staff trained and quizzed on ethical and safe sampling of humans and animals. This training is recorded in a central database.	N.
19	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	<b>Completed:</b> All required permissions for animals and human sampling have been obtained, including permissions from ICMR, local IACUC (DUVASU), and the Uttar Pradesh Wildlife Department.	Some permissions require regular renewal.
20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			



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13	All relevant staff have been trained using PREDICT biosafety training protocol, including modules on disposing of hazardous waste and PREDICT "Safety Guide to Laboratory Operations."
14	All relevant staff have been trained using PREDICT biosafety training protocol, including modules on disposing of hazardous waste and PREDICT "Safety Guide to Laboratory Operations."
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16	<b>Remarks</b>
17	All relevant staff have been trained using PREDICT biosafety training protocol, including modules on disposing of hazardous waste and PREDICT "Safety Guide to Laboratory Operations."
18	All relevant staff have been trained using PREDICT biosafety training protocol, including modules on collection of specimens in ethical way and disposing of hazardous waste and PREDICT "Safety Guide to Laboratory Operations."
19	All required permissions obtained in a timely manner.
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21	Number	Mitigation Measures	Status of Mitigative Measures	List any outstanding issues relating to required conditions
22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for project personnel in environmental impacts and outbreak response in training materials.	PREDICT and required project guidelines available; relevant staff trained and quizzed on PREDICT protocol in Outbreak Response. Not engaged in outbreak response activities to date.	PREDICT developed its complete field and lab team and imparted training to them in all relevant PREDICT protocols. The team will be able to engage local government agencies and federal agencies regarding outbreak response, as appropriate and if requested.
23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	<b>Completed:</b> PREDICT and required project guidelines available; relevant staff trained and quizzed on PREDICT protocol in Outbreak Response. Not engaged in outbreak response activities to date.	PREDICT developed its complete field and lab team and imparted training to them in all relevant PREDICT protocols. The team will be able to engage local government agencies and federal agencies regarding outbreak response, as appropriate and if requested.
24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Pending:</b> PREDICT and required project guidelines available; relevant staff trained and quizzed on PREDICT protocol in Outbreak Response. Not engaged in outbreak response activities to date.	PREDICT developed its complete field and lab team and imparted training to them in all relevant PREDICT protocols. The team will be able to engage local government agencies and federal agencies regarding outbreak response, as appropriate and if requested.

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21	<b>Remarks</b>
22	Not engaged in outbreak response activities to date. No request received from any provincial or federal agency
23	Not engaged in outbreak response activities to date. No request received from any provincial or federal agency
24	Not engaged in outbreak response activities to date. No request received from any provincial or federal agency

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1	<b>PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report</b>			
2	<b>Country:</b>	INDONESIA		
3	<b>Reporter:</b>	Kevin Olival ( <a href="mailto:olival@ecohealthalliance.org">olival@ecohealthalliance.org</a> ); Alice Latinne ( <a href="mailto:latinne@ecohealthalliance.org">latinne@ecohealthalliance.org</a> )		
4				
5	<b>IEE Activity 1: Procurement, storage, management, and disposal of public health commodities</b>			
6	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	<p><b>Completed:</b> MSDS sheets have been reviewed by all relevant personnel, product disposal trainings have been conducted and documented; copies of all master documents are held in a master binder.</p> <p><b>Completed:</b> Training of PREDICT Basic Laboratory Safety protocol completed in August 2018. Records maintained by PREDICT Indonesia Administration and EIDITH.</p> <p><b>Completed:</b> Annual laboratory inspection was conducted in August 2018 and external assessment was done September 2018 by independent assessor.</p>	Training of PREDICT Animal Care and Use, Safe Capture and Sampling and non-human primates, Bat and Rodent sampling methods for wildlife administrative staff and field support to be conducted at the beginning of Y5. Refresher on PREDICT Basic Laboratory Safety protocol will also be conducted in Y5.
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	<p><b>Completed:</b> Guidelines provided and trainings conducted and documented for all laboratory personnel; all training documents maintained by Safety Officer; cold chain equipment was properly inventoried. <b>Completed:</b> Training using PREDICT Implementing Cold Chain for Safe Sample Transport and Storage protocol in August 2018. Records maintained by PREDICT Indonesia Administration and EIDITH.</p>	Training using PREDICT Implementing Cold Chain for Safe Sample Transport and Storage protocol for wildlife administrative staff and field support to be conducted at the beginning of Y5. Refresher on PREDICT Basic Laboratory Safety protocol will also be conducted in Y5. The Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., the E M&M Tool - Action Plan) will be completed
9	1.3	Provide PREDICT and EGSSAA guidelines and conduct trainings on disposal of all public health commodities; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<p><b>Completed:</b> Guidelines provided and SOP is in place; trainings conducted and documented for all laboratory personnel; all training documents maintained by Safety Officer.</p> <p><b>Completed:</b> Training of PREDICT Safe Disposal Carcasses and Infectious Waste Guide and PREDICT Basic Laboratory Safety protocol in August 2018. Records maintained by PREDICT Indonesia Administration and EIDITH.</p> <p><b>Completed:</b> Annual laboratory inspection was conducted in August 2018 and external assessment was done September 2018 by independent assessor.</p>	Training of PREDICT Safe Disposal Carcasses and Infectious Waste Guide and PREDICT Basic Laboratory Safety protocol for wildlife field support to be conducted at the beginning of Y5. Refresher on PREDICT Basic Laboratory Safety protocol will also be conducted in Y5.
10	<b>IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste</b>			
11	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>

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6	<b>Remarks</b>
7	<p>Institutional policy requires all personnel handling biological agents and animals to receive annual training in Biosafety and Biosecurity, Occupational and Safety and Blood borne Pathogens.</p> <p>Additionally, personnel involved in PREDICT received training on PREDICT protocols. All training events are documented.</p>
8	<p>Institutional policy requires all personnel handling biological agents and animals to receive annual training in Biosafety and Biosecurity, Occupational and Safety and Blood borne Pathogens.</p> <p>Additionally, personnel involved in PREDICT received training on PREDICT protocols. All training events are documented.</p>
9	<p>Institutional policy requires all personnel handling biological agents and animals to receive annual training in Biosafety and Biosecurity, Occupational and Safety and Blood borne Pathogens.</p> <p>Additionally, personnel involved in PREDICT received training on PREDICT protocols. All training events are documented.</p>
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11	<b>Remarks</b>

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12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	<p><b>Completed</b> - SOP is in place; trainings conducted and documented for all laboratory personnel; all training documents maintained by Safety Officer.</p> <p><b>Completed:</b> Training of PREDICT Basic Laboratory Safety protocol in August 2018. Records maintained by PREDICT Indonesia Administration and EIDITH. <b>Completed:</b> Annual laboratory inspection was conducted in August 2018 and external assessment was done September 2018 by independent assessor.</p>	Training of PREDICT Basic Laboratory Safety protocol for wildlife administrative staff and field support to be conducted at the beginning of Y5.
13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., <i>the E M&amp;M Tool - Action Plan</i> ).	<p><b>Completed</b> - Guidelines provided and SOP are in place; trainings conducted and documented for all laboratory personnel; all training documents maintained by Safety Officer.</p> <p><b>Completed</b> - Training of PREDICT Basic Laboratory Safety protocol in August 2018. Records maintained by PREDICT Indonesia Administration and EIDITH.</p> <p><b>Completed</b> - E M&amp;M Tool on the Healthcare Waste Management Minimum Program Checklist and Action Plan.</p> <p><b>Completed:</b> Annual laboratory inspection was conducted in August 2018 and external assessment was done September 2018 by independent assessor. <b>Completed</b> - All PREDICT staff in contact with human samples have received Hepatitis B vaccination as required by institutional policy.</p>	Training of PREDICT Basic Laboratory Safety protocol for wildlife administrative staff and field support to be conducted at the beginning of Y5.
14	2.3	Provide PREDICT, EGSSAA, and WHO guidelines and conduct trainings in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	<p><b>Completed</b> - PREDICT and WHO Guidelines are in place and SOP is available; trainings conducted and documented for all laboratory personnel; all training documents maintained by Safety Officer.</p> <p><b>Completed</b> - Training of PREDICT Basic Laboratory Safety protocol in August 2018. Records maintained by PREDICT Indonesia Administration and EIDITH.</p> <p><b>Completed:</b> Annual laboratory inspection was conducted in August 2018 and external assessment was done September 2018 by independent assessor.</p>	Training of PREDICT Basic Laboratory Safety protocol for wildlife administrative staff and field support to be conducted at the beginning of Y5.
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			
16	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>

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12	<p>Institutional policy requires all personnel handling biological agents and animals to receive annual training in Biosafety and Biosecurity, Occupational and Safety and Blood borne Pathogens.</p> <p>Additionally, personnel involved in PREDICT received training on PREDICT protocols. All training events are documented.</p>
13	<p>Institutional policy requires all personnel handling biological agents and animals to receive annual training in Biosafety and Biosecurity, Occupational and Safety and Blood borne Pathogens.</p> <p>Additionally, personnel involved in PREDICT received training on PREDICT protocols. All training events are documented.</p>
14	<p>Primate Research Center institutional policy requires all personnel handling biological agents and animals to receive annual training in Biosafety and Biosecurity, Occupational and Safety and Blood borne Pathogens. Additionally, personnel involved in PREDICT received training on PREDICT protocols. All training events are documented.</p>
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16	Remarks

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17	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	<p><b>Completed</b> - IACUC approval (number IPB PRC-16-D001) from Primate Research Center from 2016 - 2018.</p> <p><b>Completed</b> - IBC approval (number 004-PD-PSSP-09-2018) from Primate Research Center from 2018 - 2019</p> <p><b>Completed</b> - Training of PREDICT Animal Care and Use, Safe Capture and Sampling and non-human primates, Bat and Rodent sampling methods conducted in August 2018 (wildlife veterinary team). Records maintained by PREDICT Indonesia Administration and EIDITH.</p> <p><b>Completed</b> - IRB for Human Syndromic Surveillance Study and Behavioral Study approved by UC Davis, Eijkman Institute and Sam Ratulangi University in August 2017.</p> <p><b>Completed</b> - PREDICT ethical and safe sampling was conducted in October 2017.</p>	Training of PREDICT Animal Care and Use, Safe Capture and Sampling and non-human primates, Bat and Rodent sampling methods for wildlife field support team to be conducted at the beginning of Y5.
18	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	<p><b>Completed</b> - Guidelines provided and SOP is in place; trainings conducted and documented for all animal care personnel; all training documents maintained by IACUC.</p> <p><b>Completed</b> - Training of PREDICT Animal Care and Use, Safe Capture and Sampling and non-human primates, Bat and Rodent sampling methods conducted in August 2018 (wildlife veterinary team). Guidelines provided and SOP is in place for PREDICT human sampling method; trainings conducted and documented for all PREDICT staff and clinicians. Records maintained by PREDICT Indonesia Administration and EIDITH.</p>	Training of PREDICT Animal Care and Use, Safe Capture and Sampling and non-human primates, Bat and Rodent sampling methods for wildlife field support team to be conducted at the beginning of Y5.
19	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	<b>Completed</b> - Original copies of all required permits for animal sampling for Southeast Sulawesi Province (November 2017), West Sulawesi Province (November 2017), Gorontalo and North Sulawesi Province (January 2018), North Sulawesi Province (April 2018), Southeast Sulawesi Province (July 2018) and West Sulawesi Province (July 2018) are maintained onsite with copies available for review. Original copies of all required permits for human sampling in North Sulawesi, West Sulawesi, and Southeast Sulawesi are maintained with copies available for review.	



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17	<p>Primate Research Center institutional policy requires that all personnel handling animals receive training on Animal Care and Use in Research, Testing and Education in addition to training in Biosafety and Biosecurity, Occupational and Safety and Blood borne Pathogens, and PREDICT protocols.</p> <p>IRB and human subjects research permissions dependent upon approval of Global protocol in the US.</p>
18	<p>Primate Research Center institutional policy requires that all personnel handling animals receive training on Animal Care and Use in Research, Testing and Education in addition to training in Biosafety and Biosecurity, Occupational and Safety and Blood borne Pathogens, and PREDICT protocols.</p>
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20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			
21	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for project personnel in environmental impacts and outbreak response in training materials.	<b>Completed</b> - Discussions held with the local provincial health officers with regards to the surveillance sites and interfaces targeted for sampling for humans and animals; upon invitation to support outbreak response activities, meetings to be held with local environmental experts, NGO's, and ministry officials, as appropriate.	
23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	<b>Completed</b> - Trainings of PREDICT Providing Assistance during a Disease Outbreak conducted in December 2018 (wildlife lab and veterinary team). Records maintained by PREDICT Indonesia Administration and EIDITH. Training on biosafety, biosecurity and basic laboratory safety for health workers from the surrounding of PREDICT's human sampling study sites was conducted in January 2018 as a part of outbreak preparedness plan.	Trainings of PREDICT Providing Assistance during a Disease Outbreak for wildlife administrative and field support team to be conducted at the beginning of Y5.
24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Completed</b> - PREDICT SOP is in place. <b>Completed</b> - Trainings of PREDICT Providing Assistance during a Disease Outbreak conducted in December 2018 (wildlife lab and veterinary team). Records maintained by PREDICT Indonesia Administration and EIDITH.	Trainings of PREDICT Providing Assistance during a Disease Outbreak for wildlife administrative and field support team to be conducted at the beginning of Y5.

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21	<b>Remarks</b>
22	Plans to expand training of Ministry of Health, Ministry of Environment and Forestry as well as Ministry of Agriculture staffs in Year 5 in coordination with USAID.
23	On site training on biosafety, biosecurity and PREDICT testing protocols to government laboratory (Ministry of Health) will conducted in Y5.
24	In addition, PREDICT Indonesia team follows Indonesian regulations regarding outbreaks (UU No. 4 1984 and PP No.40 1991).

	A	B	C	D
1	<b>PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report</b>			
2	<b>Country:</b>	JORDAN		
3	<b>Reporter:</b>	William Karesh (karesh@ecohealthalliance.org); Patrick Dawson (dawson@ecohealthalliance.org)		
4				
5	<b>IEE Activity 1: Procurement, storage, management, and disposal of public health commodities</b>			
6	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	<b>Complete</b> - MSDS sheets were provided to both lab and field teams according to with manufacturers' guidelines. MSDS hardcopies are also available in the laboratories. All current PREDICT-2 personnel are aware and trained.	All trainings on up to date on current PREDICT-1 and PREDICT-2 protocols; Updated training will be ongoing as new materials become available.
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	<b>Complete</b> - Trainings on cold chain and supply chain management to ensure proper collection, transportation and storage of specimens were conducted and all recommended measures were implemented for all PREDICT-2 staff and according to PREDICT-2 protocols.	All trainings on up to date on current PREDICT-1 and PREDICT-2 protocols; Updated training will be ongoing as new materials become available.
9	1.3	Provide PREDICT and EGSSAA guidelines and conduct trainings on disposal of all public health commodities; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Complete</b> - All PREDICT staff were trained on proper handling and disposal of healthcare generated wastes and biosecurity and biosafety issues according to PREDICT-2 and EGSSAA guidelines.	All trainings on up to date on current PREDICT-1 and PREDICT-2 protocols; Updated training will be ongoing as new materials become available.
10	<b>IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste</b>			
11	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	<b>Complete</b> - Staff have been trained using PREDICT biosafety training protocol; all biohazard waste stored in sealed bags while awaiting collection. All medical wastes are properly disposed at the university incinerator.	
13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., the <i>E M&amp;M Tool - Action Plan</i> ).	<b>Complete</b> - Training for laboratory and field teams for all implementing personnel in handling of sharps, disposal of sharps, and disposal of highly hazardous medical waste were done. All recommended measures are implemented. <b>Ongoing</b> - the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (E M&M Tool - Action Plan).	

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7	For any new staff a review workshop for use and storage of media is held upon hiring.
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14	2.3	Provide PREDICT, EGSSAA, and WHO guidelines and conduct trainings in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	<b>Complete</b> - Laboratory and field team are following PREDICT-2 guidelines at facilities.	
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			
16	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
17	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	<b>Complete</b> - IACUC protocol is approved and all PREDICT field team is aware of the protocol and is appropriately trained on ethical, safe sampling and animal handling protocols. The Human IRB received approval from UCD IRB and the Jordan University of Science and Technology IRB. All personnel have been trained in PREDICT-2 protocols, ethical human research, and CITI human subjects protection.	All trainings on up to date on current PREDICT-1 and PREDICT-2 protocols; Updated training will be ongoing as new materials become available.
18	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	<b>Complete</b> - Trainings in animal capture, handling, and sample acquisition is done for field team according to PREDICT-2 protocols, as well as the IRB or IACUC protocols. All personnel have been trained in humane, ethical, and biological safe sampling.	All trainings on up to date on current PREDICT-1 and PREDICT-2 protocols; Updated training will be ongoing as new materials become available.
19	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	<b>Complete</b> - Animal capture, handling and sampling permissions are completed. All documentation of local and UC Davis IRB approvals, staff training in human subjects research, and relevant PREDICT quizzes are maintained and readily available.	All trainings on up to date on current PREDICT-1 and PREDICT-2 protocols; Updated training will be ongoing as new materials become available.
20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			
21	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for project personnel in environmental impacts and outbreak response in training materials.	<b>Ongoing</b> - Regular meetings with officials from USAID/Jordan, Ministry of Agriculture, Ministry of Health, Ministry of Environment, WHO, and FAO are held to discuss project objectives and outbreak planning.	

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22	PREDICT will address issues of sensitive species and habitats in event of project involvement in outbreak response activities with ministry partners as appropriate.

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23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	PREDICT Jordan is designated as limited engagement; outbreak assistance is not within the scope of the project though PREDICT will address outbreak response activities with ministry partners as appropriate. Project staff have been trained on PREDICT response protocols.	
24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	PREDICT Jordan is designated as limited engagement; outbreak assistance is not within the scope of the project though PREDICT will address outbreak response activities with ministry partners as appropriate. Project staff have been trained on PREDICT response protocols.	



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1	<b>PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report</b>			
2	<b>Country:</b>	KENYA		
3	<b>Reporter:</b>	Suzan Murray, SI, (murrays@si.edu); Dawn Zimmerman (ZimmermanD@si.edu)		
4				
5	<b>IEE Activity 1: Procurement, storage, management, and disposal of public health commodities</b>			
6	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	<b>Completed:</b> Chemical and hazardous waste disposal is in compliance with WHO and/or manufacturer guidelines and in compliance with PREDICT protocols for IPR laboratory and field teams. MSDS folders and sheets are available in the laboratory for reagent/chemical usage.	Ongoing: Specific MSDS briefings for new products continues to be documented and records maintained. New personnel are trained on protocols prior to working in the lab.
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	<b>Completed:</b> Training of PREDICT staff in cold chain undertaken using available PREDICT-2 protocols for proper sample collection, transportation and storage of samples.	Ongoing: PREDICT continues to provide supply chain management guidelines to Kenya partners as part of the PREDICT trainings.
9	1.3	Provide PREDICT and EGSSAA guidelines and conduct trainings on disposal of all public health commodities; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	PREDICT-2 training has been undertaken by the PREDICT-2 staff. PREDICT-2 biosafety training expanded to Kenyan governmental partners as well as students and community members (e.g., medical officers) during PREDICT trainings.	
10	<b>IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste</b>			
11	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	<b>Completed:</b> PREDICT-2 staff have been trained using PREDICT-2 biosafety training protocols, including waste management. IPR medical waste is stored in designated biohazard containers and routinely disposed of per WHO guidelines. PREDICT staff received refresher training yearly. IPR implements and maintains a waste register of type and amount.	Plans for a final Year 5 training will underscore biosafety and waste management, which was found to be a gap in two laboratories (non-PREDICT but governmental labs). The training will utilize DTRA trainers as well as PREDICT staff.
13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., <i>the E M&amp;M Tool - Action Plan</i> ).	<b>Completed:</b> PREDICT-2 staff trained on biosafety for handling of biohazardous material. The Healthcare Waste Management Minimum Program Checklist and Action Plan is completed annually and overseen by the lab manager at IPR, as required by the International Organization for Standardization.	

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14	2.3	Provide PREDICT, EGSSAA, and WHO guidelines and conduct trainings in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	<b>Completed:</b> All PREDICT staff have been trained using PREDICT and WHO biosafety protocols, including guidelines in the handling of sharps, and in the generation and disposal of hazardous medical waste. Training status and implementation of guidelines is documented.	New personnel are trained on protocols prior to working in the lab.
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			
16	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
17	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	<b>Completed:</b> IACUC and IRB protocols are reviewed by PREDICT staff prior to PREDICT activities, and copies are on file for review at any time. Additionally, PREDICT staff are trained in safe and ethical animal and human surveillance methods through CITI, IACUC 101, and PREDICT protocols.	
18	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	<b>Completed:</b> PREDICT-2 staff trained in humane, safe and ethical animal handling during sample collection. PREDICT-2 staff and partners trained in safe and ethical human subjects research.	
19	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	<b>Completed:</b> Copies of current research and wildlife capture and release permits available at the PREDICT office, Kenya.	
20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			
21	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for project personnel in environmental impacts and outbreak response in training materials.	Identified key partners from the MENR and related NGOs. Outbreak contact list has been finalized and partner organizations are aware of the sensitive nature of outbreak situations.	Plans to include more outbreak discussion as part of final training as well as stakeholder's meeting.
23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	PREDICT staff have been trained in PREDICT-2 outbreak guidance.	

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18	Training on PREDICT protocols is refreshed yearly.
19	Wildlife capture permits renewed quarterly; IRB renewal in April 2019.
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21	<b>Remarks</b>
22	Working closely with MENR partners such as KWS and NGOs (e.g. Kenya Wildlife Trust). Currently restricted from engaging with MoH (exception would be approved activities during an actual outbreak).
23	Training on PREDICT protocols is refreshed yearly. During an actual outbreak, protocols would be reviewed prior to any response activities.

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24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	PREDICT staff have been trained in PREDICT-2 outbreak guidance and safe management and disposal of waste. Trainings are documented.	Plans for a final Year 5 training will underscore biosafety and waste management, which will include specific vigilance in an outbreak situation. Guidelines will be provided.

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24	Currently restricted from engaging with MoH (exception would be approved activities during an actual outbreak).

	A	B	C	D
1	<b>PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report</b>			
2	<b>Country:</b>	LAO PDR		
3	<b>Reporter:</b>	Dave McIver (dmciver@metabiota.com)		
4				
5	<b>IEE Activity 1: Procurement, storage, management, and disposal of public health commodities</b>			
6	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	<b>Complete</b> - MSDS sheets maintained, reviewed by and available to all staff. Products stored and disposed of appropriately according to guidelines.	
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	<b>Complete</b> - Training conducted and documented for all personnel; PREDICT guidelines available to staff.	
9	1.3	Provide PREDICT and EGSSAA guidelines and conduct trainings on disposal of all public health commodities; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Complete</b> - Guidelines provided and SOPs in place; trainings conducted and documented.	
10	<b>IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste</b>			
11	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	<b>Complete</b> - Trainings have been conducted and documented for all relevant personnel. Medical waste stored and disposed of appropriately according to guidelines, log book maintained by PREDICT staff.	
13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., the <i>E M&amp;M Tool - Action Plan</i> ).	<b>Complete</b> - PREDICT guidelines provided, trainings conducted and documented; recommended measures implemented in lab and field sites; hazardous and highly hazardous waste stored and disposed of appropriately according to guidelines, log book maintained by PREDICT staff; E M&M Tool - Action Plan completed.	

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14	2.3	Provide PREDICT, EGSSAA, and WHO guidelines and conduct trainings in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	<b>Complete</b> - Guidelines provided and maintained in lab and field sites; training conducted and documented for relevant personnel; hazardous and highly hazardous waste stored and disposed of according to guidelines, log book maintained by PREDICT staff.	
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			
16	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
17	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	<b>Complete</b> - IACUC protocol compliance and local permission for animal sampling attained; ACU 101 training completed by country lead; training in PREDICT protocols for ethical and safe animal handling and sampling completed by all relevant personnel, training documented.	
18	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	<b>Complete</b> - Training conducted and documented for humane, ethical, safe animal capture, handling, and sampling; guidelines provided. Complete - Training in ethical, safe human sampling conducted and documented; guidelines available.	
19	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	<b>Complete</b> - Animal sampling permission attained by appropriate in-country governing authority; permissions kept on site. Complete: PREDICT-2 human surveillance protocols renewed by Lao PDR IRB committee in April 2018.	
20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			
21	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for project personnel in environmental impacts and outbreak response in training materials.	PREDICT team has, and will continue to, participate in national level outbreak simulation exercises with local ministries and organizations. Ongoing - Team will assist in outbreak response planning upon government request and will follow all required procedures and protocols as appropriate, including consultations with relevant ministries for outbreak planning.	Team will take future opportunities to specifically discuss sensitive species and habitat in the context of outbreak response planning.
23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	<b>Complete</b> - Key personnel have completed and documented training in providing assistance during disease outbreaks. Trainings related to human outbreak response for surveillance staffs have been completed.	

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22	PREDICT will address issues of sensitive species and habitats in event of project involvement in outbreak response activities with ministry partners as appropriate.
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24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Complete</b> - Guidelines provided; relevant PREDICT protocol trainings conducted and documented for key personnel. Trainings related to waste disposal during outbreak situations for human surveillance staffs have been completed.	

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1	<b>PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report</b>			
2	<b>Country:</b>	LIBERIA		
3	<b>Reporter:</b>	Jon Epstein (Epstein@EcoHealthAlliance.org); Emma Lane (lane@ecohealthalliance.org)		
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5	<b>IEE Activity 1: Procurement, storage, management, and disposal of public health commodities</b>			
6	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	<b>Ongoing-</b> Creating and updating MSDS sheets in appropriate binders for hazardous chemicals used during PREDICT activities.	Presently MSDS sheets are available for PREDICT field staff. There is currently no PREDICT lab activity in Liberia. As the laboratory program develops appropriate actions will be taken to ensure compliance with institutional policies.
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	<b>Complete-</b> Staff trained on proper collection, transportation and storage of specimens/products using current PREDICT-2 protocols for cold chain and supply chain management.	All trainings are up to date on current PREDICT-1 and PREDICT-2 protocols; Updated training will be ongoing as new materials become available.
9	1.3	Provide PREDICT and EGSSAA guidelines and conduct trainings on disposal of all public health commodities; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Complete-</b> Staff trained on proper biosafety and laboratory management protocols using current PREDICT-2 protocols. <b>Ongoing-</b> EGSSAA materials to be distributed.	EGSSAA materials to be made available in the next few months to PREDICT staff.
10	<b>IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste</b>			
11	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	<b>Complete-</b> Staff trained on proper biosafety measures and disposal of medical waste according to PREDICT-2 protocols. Biohazardous waste is disposed of appropriately in the field and/or at the nearest medical facility via incinerator. <b>Ongoing-</b> Development of documentation protocols for biohazardous waste disposal.	
13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., <i>the E M&amp;M Tool - Action Plan</i> ).	<b>Complete-</b> Field staff trained on proper biosafety measures in handling of sharps and disposal of medical waste according to PREDICT-2 protocols. <b>Ongoing-</b> Primary laboratory is currently not established but personnel will be trained on appropriate PREDICT-2 protocols. Health Care Waste Management Minimum Program Checklist and action plan to be completed using the EM&M Tool in the coming months.	PREDICT will be conducting training of government of Liberia laboratory personnel which will include appropriate protocols.

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6	<b>Remarks</b>
7	Compliance with institutional policies and adherence to PREDICT-2 protocols are routinely reviewed and addressed on a quarterly basis.
8	Compliance with institutional policies and adherence to PREDICT-2 protocols are routinely reviewed and addressed on a quarterly basis.
9	Compliance with institutional policies and adherence to PREDICT-2 protocols are routinely reviewed and addressed on a quarterly basis.
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11	<b>Remarks</b>
12	Compliance with institutional policies and adherence to PREDICT-2 protocols are routinely reviewed and addressed on a quarterly basis.
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14	2.3	Provide PREDICT, EGSSAA, and WHO guidelines and conduct trainings in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	<b>Complete-</b> Field staff trained on proper biosafety measures related to the handling of sharps and disposal of hazardous medical waste according to PREDICT-2 protocols, EGSSAA and WHO guidelines. Trainings documented in central database.	
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			
16	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
17	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	<b>Complete-</b> Appropriate staff have received training in IACUC 101, ethics and PREDICT-2 protocols related to ethical treatment and handling of animals. IRB approved by Ministry of Health and final approval at UCD for qualitative research also completed	
18	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	<b>Complete-</b> Appropriate staff have been trained on PREDICT-2 protocols related to humane animal capture, handling and sample acquisition.	Liberia is part of the Ebola Host Project and no human sampling to be done.
19	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	<b>Complete-</b> Original permissions for animal capture, handling and sampling are maintained at our office in Monrovia. <b>Complete-</b> IRB approval received for PREDICT-2 related human behavioral study.	Liberia is part of the Ebola Host Project and no human sampling to be done.
20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			
21	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for project personnel in environmental impacts and outbreak response in training materials.	<b>Ongoing-</b> Meet regularly with the MOH, MOA and FDA representatives at the Emergency Operation Center established during the Ebola outbreak. Involved in establishment of the One Health Platform along with EPT-2 partner P&R.	
23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	<b>Ongoing-</b> Training PREDICT outbreak assistance protocol in process.	Trainings will be conducted with all staff on any new Outbreak Assistance protocols as these are made available in Y5.

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14	Compliance with institutional policies and adherence to PREDICT-2 protocols are routinely reviewed and addressed on a quarterly basis.
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16	<b>Remarks</b>
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18	Human sampling is not applicable in Liberia at present.
19	Compliance with institutional policies and adherence to PREDICT-2 protocols are routinely reviewed and addressed on a quarterly basis.
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21	<b>Remarks</b>
22	The PREDICT-2 country coordinator attends weekly meetings at the National Public Health Institute HQ with local and international public health representatives, attends all One Health related activities, and liaises with FDA and other conservation sector partners routinely.
23	Compliance with institutional policies and adherence to PREDICT-2 protocols are routinely reviewed and addressed on a quarterly basis.

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24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Ongoing-</b> PREDICT-2 materials provided for review by personnel; EGSSAA and Sphere Handbook to be distributed and made available in the coming months.	



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24	Compliance with institutional policies and adherence to PREDICT-2 protocols are routinely reviewed and addressed on a quarterly basis.

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1	PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report			
2	Country:	MALAYSIA		
3	Reporter:	Tom Hughes (tom.hughes@ecohealthalliance.org); Mei Ho Lee (lee@ecohealthalliance.org)		
4	Note:	All abbreviations provided at bottom of table		
5	IEE Activity 1: Procurement, storage, management, and disposal of public health commodities			
6	Number	Mitigation Measures	Status of Mitigative Measures	List any outstanding issues relating to required conditions
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	SWD WHGFL & WHU / NPHL / NWFL (Zoonotic Lab): Complete - MSDS documents are up-to-date and have been reviewed and understood by relevant lab and field personnel; hardcopy of all MSDS are available in the lab office; conducted trizol-specific training for NWFL research officers; all PREDICT and Deep Forest Sampling team members participated in the animal sampling have read and understood the MSDS sheet for the chemicals and drugs. SWD WHU & WHGFL: Implemented biannual exercise for handling and responding to a trizol spill and phenol first aid. Updated training on PREDICT 2 protocols. UPM: Complete - Have their own system following the guide from the National Environmental Department. QEH CRC: trained all study personnel on lab safety and biosafety and how to handle trizol and phenol first aid. MOH DHO: trained all study personnel on lab safety and biosafety and the awareness of all potential hazards in the human sampling setting.	Will complete PREDICT Biosafety and PPE and Packing and Shipping trainings when appropriate. No outstanding issues.
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	DWNP WDSP / Sabah Wildlife Department (WHGFL, WRU, WHU): Complete - Guidelines provided and lab and field trainings conducted. Updated training on PREDICT-2 protocols. NPHL / KKPHL: Complete - Have their own biosafety training and system, following Malaysia Standard Quality Procedure (MS ISO 9001:2008) and MOH and WHO guidelines. NPHL / QEH CRC: trained all study personnel on maintaining cold chain.	

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6	<b>Remarks</b>
7	PREDICT only has control of storage and disposal of products used at UPM and NWFL and all products at WHGFL. All new staff are required to do PREDICT quizzes, read and understand the lab/field SOPs that include all aspects related to the MSDS and sign an agreement form before starting any work in the lab or field.
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9	1.3	Provide PREDICT and EGSSAA guidelines and conduct trainings on disposal of all public health commodities; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	DWNP WDSP/ Sabah Wildlife Department: Complete - Guidelines provided and lab and field trainings conducted; detailed in SOPS shared with DWNP and prepared for WHGFL. SWD WHU & WHGFL: Updated training on PREDICT 2 protocols. NPHL / KKPHL: Complete - Have their own biosafety training and system, following Malaysia Standard Quality Procedure (MS ISO 9001:2008) and MOH and WHO guidelines. UPM: Complete - Have their own system following the guide from National Environmental Department and regulations from national Environmental Quality Act 1974.C12	Will complete PREDICT Biosafety and PPE and Packing and Shipping trainings when appropriate.
10	<b>IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste</b>			
11	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	<b>WHGFL / NWFL (Zoonotic Lab): Complete</b> - Conducted and documented lab and field trainings and reported to the central database; staff are required to understand and sign an agreement form before starting any work; detailed in SOPS shared with DWNP and prepared for WHGFL; all partners employ biosafety companies who are licensed to dispose of medical waste. <b>NPHL: Complete</b> - Biosafety company employed to manage wastes; staff have been given biosafety training that includes medical waste measures. SWD WHU & WHGFL: Updated training on PREDICT 2 protocols. <b>UPM: Complete</b> - Have their own system following the guide from National Environmental Department and regulations from national Environmental Quality Act 1974. QEH CRC: trained all study personnel on lab safety and biosafety. MOH DHO: trained all study personnel on lab safety and biosafety and the awareness of all potential hazards in the human sampling setting.	SOPs to be reviewed annually for new activities. PREDICT is not responsible for staff at NWFL and NPHL who are not involved with project activities and who may not adhere to these guidelines.

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9	PREDICT only has control over implementing guidelines at WHGFL and for PREDICT work at DWNP and UPM not other activities. PREDICT is being given increasing input to managing other activities at DWNP as we help develop new lab.
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11	<b>Remarks</b>
12	PREDICT only has control over implementing guidelines at WHGFL and for PREDICT work at NWFL and UPM not other activities. PREDICT is being given increasing input to managing other activities at NWFL as we help develop new lab. Companies employed by our partners to dispose of medical waste are not under our control but are required to adhere to these guidelines.

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13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., the <i>E M&amp;M Tool - Action Plan</i> ).	<b>SWD WHU WRU WHGFL / DWNP WDSP/ NWFL (Zoonotic Lab): Complete</b> - E M&M Tool Action Plan completed; guidelines provided and trainings conducted for lab and field; all training is documented and reported; detailed in SOPS shared with prepared for WHGFL; staff are required to understand and sign an agreement form before starting any work; local waste disposal services employed for solid and liquid wastes. DWNP: Have incinerators for animal carcasses. <b>NPHL / KKPHL: Complete</b> - Biosafety company employed to manage wastes; staff have been given biosafety training that includes medical waste measures. SWD WHU & WHGFL: Updated training on PREDICT 2 protocols. <b>UPM: Complete</b> - Have their own system following the guide from National Environmental Department and regulations from national Environmental Quality Act 1974. MOH DHO / QEH CRC: trained all study personnel on PREDICT lab safety and biosafety including sharps handling and generation of medical waste from blood collection.	SOPs to be reviewed annually for any new activities. PREDICT is not responsible for staff at NWFL who are not involved with project activities and who may not adhere to these guidelines. DWNP WDSP & NWFL: PREDICT 2 trainings to be conducted before starting field work and work at the zoonotic section of NWFL.
14	2.3	Provide PREDICT, EGSSAA, and WHO guidelines and conduct trainings in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	<b>SWD WHU WRU WHGFL / DWNP WDSP / NWFL (Zoonotic Lab): Complete</b> - Guidelines provided and trainings conducted for lab and field; all training is documented and reported to the central database; staff are required to understand and sign an agreement form before starting any work; employed local waste disposal services for solid and liquid wastes; detailed in SOPS shared with DWNP and prepared for WHGFL. <b>NPHL / KKPHL: Complete</b> - Biosafety company employed to manage wastes; staff have been given biosafety training that includes medical waste measures. SWD WHU & WHGFL: Updated training on PREDICT 2 protocols. <b>UPM: Complete</b> - Have their own system following the guide from National Environmental Department and regulations from national Environmental Quality Act 1974. MOH DHO / QEH CRC: trained all study personnel on PREDICT lab safety and biosafety including sharps handling and generation of medical waste from blood collection.	SOPs to be reviewed annually for any new activities. PREDICT is not responsible for staff at NWFL who are not involved with project activities and who may not adhere to these guidelines.
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			

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13	PREDICT only has control over implementing guidelines at WHGFL and for PREDICT work at DWNP and UPM not other activities. PREDICT is being given increasing input to managing other activities at DWNP as we help develop new lab.
14	PREDICT only has control over implementing guidelines at WHGFL and for PREDICT work at DWNP and UPM not other activities. PREDICT is being given increasing input to managing other activities at DWNP as we help develop new lab.
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	Number	Mitigation Measures	Status of Mitigative Measures	List any outstanding issues relating to required conditions
16	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	<b>Complete</b> - Following PREDICT guidelines on proper sampling and handling for different animal taxa; all field staff involved with PREDICT sampling have received training and completed tests on ethical and safe sampling and animal handling protocols with all training documented and reported to the central database. SWD WHU: Updated training on PREDICT 2 protocols and completed IACUC 101 quiz. UPM: Internal IACUC established. QEH / KKPHL: Appropriate personnel trained on Good Clinical Practice approved by National Committee for Clinical Research and Ministry of Health Malaysia. District Health Offices (Kuala Lipis, Gua Musang and Kuala Langsar) / QEH CRC: Complete - CITI Social, Behavioral and Educational basic online course.	SOPs to be reviewed annually to include any new activities. DWNP WDSP: PREDICT-2 refresher trainings to be conducted every year for actively-involved personnel.
17	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	<b>Sabah Wildlife Department (WHGFL, WHU, WRU) / DWNP WDSP: Complete</b> - Trainings provided for field teams following the PREDICT guidelines for sampling and handling of animals; all partners have received PREDICT guidelines and protocols; all training is documented and reported to the central database. Updated training on PREDICT 2 protocols and completed IACUC 101 quiz. MOH: Complete - trainings for OA study DHO teams in conducting interviews and human sampling. UPM: Own IACUC guidelines. QEH CRC / KKPHL: Trained on appropriate PREDICT 2 protocols in preparation for human syndromic surveillance.	SOPs to be reviewed annually to include any new activities.
18	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	MOH / SSHD: Ongoing - PREDICT is in compliance with local Medical Research and Ethics Committee and UCD IRB requirements for all human studies; new permissions are renewed annually. SWD / DWNP: Ongoing - Permission to conduct animal sampling and use of drugs for veterinary anesthesia and euthanasia (if necessary for animal welfare) purposes granted. SWD / SSHD: Ongoing and pending - Annual renewal of SaBC / EPU / UPEN permits to conduct human and animal studies in Sabah. UPM: IACUC approval pending prior to conducting animal sampling in farms.	All required permissions and documents are renewed annually.
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20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			



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18	See 3.1 for additional details on CITI/ethical training.
19	Permits not required for animal sampling as working with SWD and DWNP.
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21	Number	Mitigation Measures	Status of Mitigative Measures	List any outstanding issues relating to required conditions
22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for project personnel in environmental impacts and outbreak response in training materials.	Ongoing - Limited discussion on outbreak planning with all government partners in terms of preparation, preparedness and need for regular training and review of SOPs and risk assessments; surveillance and sampling sites shared with all partners prior to engagement; upon invitation to support outbreak response activities, meetings to be held with local environmental experts, NGO's, and ministry officials as appropriate.	
23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	Ongoing - Some outbreak trainings conducted in terms of having supplies and team on standby, conducting risk assessments, and safe animal capture and sampling techniques.	
24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	Ongoing - EGSSAA and Sphere Handbook guidelines made available for review; all available guidelines provided with trainings conducted using PREDICT-1 and PREDICT-2 materials as new training protocols are in development; documentation of all trainings maintained locally with PREDICT trainings also reported to the central database.	Staff will follow PREDICT-2 guidelines and ensure training for management and disposal of solid and medical waste during outbreaks according to the procedures outlined in IEE Activities 1 and 2 as in non-outbreak situations.
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26		<b>Abbreviation</b>	<b>Description</b>	
27		WHGFL	Sabah Wildlife Health, Genetic and Forensic Laboratory	
28		WRU	Wildlife Rescue Unit	
29		WHU	Wildlife Health Unit	
30		NPHL	National Public Health Laboratory	
31		DWNP	Department of Wildlife and National Parks	
32		WDSP	Wildlife Disease Surveillance Program	
33		KKPHL	Kota Kinabalu Public Health Laboratory	
34		NWFL	National Wildlife Forensic Laboratory	
35		MOH	Ministry of Health	
36		DHO	District Health Office	
37		SSHD	Sabah State Health Department	
38		QEH	Queen Elizabeth Hospital, Kota Kinabalu, Sabah	
39		OA	Orang Asli (Indigenous people of Peninsular Malaysia)	
40		UPEN	Unit Perancang Ekonomi Negeri (State Economic Planning Unit - Sabah)	
41		EPU	Economic Planning Unit - Federal	
42		UPM	University Putra Malaysia (Faculty of Veterinary Medicine)	
43		SaBc	Sabah Biodiversity Council	

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21	<b>Remarks</b>
22	No discussion around sensitive species and habitats in terms of outbreak response but is something that has been considered and discussed as an issue for normal surveillance sampling. More focus is needed on this issue in PREDICT-2.
23	More focus is needed on this issue in PREDICT-2. Will schedule outbreak assistant training with all staff and personnel from relevant partners.
24	Planning to address in Year 5 of PREDICT-2.
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1	<b>PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report</b>			
2	<b>Country:</b>	MONGOLIA		
3	<b>Reporter:</b>	Sarah Olson (b) (6)		
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5	<b>IEE Activity 1: Procurement, storage, management, and disposal of public health commodities</b>			
6	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	State Central Veterinary Lab (SCVL): MSDS sheets available for all for products used in PREDICT-2, have been reviewed and understood by relevant laboratory personnel and training provided	All products stored according to MSDS and OIE guidelines. All trainings on up to date on current PREDICT-1 and PREDICT-2 protocols; Updated training will be ongoing as new materials become available.
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	<b>SCVL: Completed</b> - Trainings conducted and guidelines provided for two PREDICT personnel on cold chain and supply chain management Field site: Complete - In-field cold chain and biosafety training conducted and documented for all relevant personnel	All trainings on up to date on current PREDICT-1 and PREDICT-2 protocols; Updated training will be ongoing as new materials become available.
9	1.3	Provide PREDICT and EGSSAA guidelines and conduct trainings on disposal of all public health commodities; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	Not Applicable: No human surveillance planned; staff and facilities following PREDICT protocols and EGSSAA guidelines for all animal surveillance activities as noted above	
10	<b>IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste</b>			
11	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	<b>Field sites: Complete</b> - Trainings have been conducted using PREDICT-2 protocols and materials; documentation for all relevant laboratory and field site personnel entered into database	SCVL: Documentation maintained for all PREDICT personnel who have reviewed safety guidelines and obtained training on protocols on an annual basis
13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., the <i>E M&amp;M Tool - Action Plan</i> ).	<b>SCVL: Ongoing</b> - Guidelines provided and trainings and assessment of skills and understanding is ongoing for disposal of hazardous waste <b>Field sites: Complete</b> - Disposal of hazardous waste trainings have been conducted using PREDICT-2 protocols and materials and documented for all relevant field personnel	Trainings have been conducted and documented for all relevant staff. All original, master documents are maintained locally with all PREDICT trainings reported to the central database. All trainings previously conducted to date on PREDICT-1 and PREDICT-2 protocols. Updated protocol training will be completed annually.

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6	<b>Remarks</b>
7	All new staff are required to read and understand the lab SOPs that include all aspects related to the MSDS.
8	PREDICT maintains control over implementing guidelines for only PREDICT work and personnel at SCVL
9	There is no public health or human health component under PREDICT-2 in Mongolia.
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11	<b>Remarks</b>
12	All new staff are required to read and understand the lab SOP's and PREDICT-2 protocols
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14	2.3	Provide PREDICT, EGSSAA, and WHO guidelines and conduct trainings in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	<b>SCVL: Ongoing</b> - Materials and guidelines provided; training ongoing as part of preparations for initiating of laboratory work. <b>Field sites: Complete</b> - Trainings have been conducted and documented for all relevant field personnel.	Dedicated binders maintained for documentation and certification of completed trainings; annual review of safety guidelines needs to be put in place in the SCVL laboratory
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			
16	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
17	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	<b>Ongoing</b> - Copies of IACUC protocols and local permission for animal sampling maintained and reviewed by all staff and relevant trainings conducted; all original, master documents are maintained locally with all PREDICT-2 trainings reported to the central database.	Trainings have been conducted and documented for all relevant staff. All original, master documents are maintained locally with all PREDICT trainings reported to the central database. All trainings previously conducted to date on PREDICT-1 and PREDICT-2 protocols.
18	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	<b>Field sites: Complete</b> - Following PREDICT-2 guidelines on proper sampling and handling of animals; all field staff involved with PREDICT sampling have received training and completed tests on safe sampling and animal handling protocols with all training documented and reported to the central database	
19	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	<b>Complete</b> - Local permissions for animal sampling maintained and reviewed by all staff and relevant trainings conducted.	
20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			
21	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for project personnel in environmental impacts and outbreak response in training materials.	<b>Field sites: Ongoing</b> - Surveillance and sampling sites shared with local environmental experts and all relevant in-country partners in terms of risk assessment, preparation, and preparedness for outbreak responses	PREDICT will address issues of sensitive species and habitats in the event of project involvement in outbreak response activities with Ministry partners as appropriate; PREDICT-2 outbreak guidance materials are available for distribution and training for all staff; trainings have been planned.
23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	<b>SCVL: Ongoing</b> - Training has been provided for outbreak assistance protocol and sampling techniques. <b>Field sites: Complete</b> - Trainings complete and documented for all relevant staff for outbreak assistance protocol and safe animal capture	

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16	<b>Remarks</b>
17	To date PREDICT in Mongolia has only sampled environmental fecal samples or dead birds; live birds or livestock may be sampled in the future as part of outbreak investigations; PREDICT is not sampling humans
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19	Not Applicable: No human surveillance planned and no human ethical approval obtained to date
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21	<b>Remarks</b>
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24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>SCVL: Ongoing</b> - Training planned for handling and disposal of solid waste in an outbreak. Field site: Complete - Trainings complete and documented for all relevant field personnel.	Trainings have been conducted and documented for all relevant staff. All original, master documents are maintained locally with all PREDICT trainings reported to the central database. All trainings previously conducted to date on PREDICT-1 and PREDICT-2 protocols. Updated protocol training will be completed as of Spring 2018.



	A	B	C	D
1	<b>PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report</b>			
2	<b>Country:</b>	Myanmar		
3	<b>Reporter:</b>	Suzan Murray, SI, (murrays@si.edu); Marc Valitutto (valituttoM@si.edu)		
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5	<b>IEE Activity 1: Procurement, storage, management, and disposal of public health commodities</b>			
6	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	<p>Product safety sheets (MSDS) from Manufacturers were provided, explained and filed in both LBVD and DMR labs. Both LBVD and DMR have SOPs for storage and disposal procedures for the products.</p> <p>Both labs are maintaining the documents with their experiences and knowledge from their PREDICT lab trainings. LBVD and Virology section of DMR, PREDICT collaborator is following SOPs for storage and disposal procedures, especially Trizol disposal.</p>	
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	<p>Lab personnel and health staff from LBVD and DMR, assistants from two concurrent focus sites, and PREDICT staff have been trained on all related PREDICT protocols including: cold chain management, proper sample collection, transportation and storage of samples.</p> <p>Refresher trainings to both labs and field assistants were provided for cold chain management, sample storage and transportation for Year 4 and 5.</p> <p>Trainings have been conducted and documented for all relevant staff. All original, master documents are maintained locally with all PREDICT trainings reported to the central database. All trainings previously conducted to date on PREDICT-2 protocols. Updated protocol training will be completed annually.</p>	

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9	1.3	Provide PREDICT and EGSSAA guidelines and conduct trainings on disposal of all public health commodities; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	Trainings were conducted in compliance with PREDICT guidelines for lab personnel from LBVD and DMR, and survey team from the health departments based at both concurrent surveillance sites; PREDICT lab biosafety protocols were presented to other staff in DMR who are indirectly working for the project; Documentation of trainings and implementation are maintained; LBVD and DMR have SOP for disposal procedures for public health commodities.	
10	<b>IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste</b>			
11	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	Appropriate guidelines for documentation of medical waste storage and disposal are provided for lab personnel of LBVD and DMR, as well as the surveillance team for humans and animals at both concurrent surveillance sites; Protocols are reviewed with surveillance team prior to each surveillance activity period and documents are maintained; Quarterly discussion held with lab personnel from LBVD and DMR for the procedures and constraints of medical waste management. During the surveillance, P2 team took serious attention on handling, storage and disposal of medical waste especially in the crowded areas in the community and the caves.	
13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., <i>the E M&amp;M Tool - Action Plan</i> ).	Appropriate guidelines and training has been provided for handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste with documentation maintained with appropriate measures implemented for LBVD and DMR, as well as the surveillance team for humans and animals at both concurrent surveillance sites; The Healthcare Waste Management Minimum Program Checklist and Action Plan is completed annually; Documentation of implementation are maintained; P2 team uses guide checklists of Basic lab safety checking both during surveillances and also with the labs.	

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14	2.3	Provide PREDICT, EGSSAA, and WHO guidelines and conduct trainings in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	Guidelines and trainings have been provided to lab personnel, health staff and surveillance teams associated with the PREDICT project prior to handling and disposing of materials with documentation maintained; Refresher trainings provided to key personnel from labs and lab technicians. Trainings and continuous monitoring of the lab technicians and field assistants during surveillance activities conducted.	
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			
16	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
17	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	PREDICT staff and associated personnel trained in safe and ethical animal and human surveillance methods; Records of PREDICT staff and all associated with the project are routinely entered in EIDITH training record; In every surveillance activity, all surveillance team members were refreshed to follow the IACUC and IRB protocols. Newly participated lab technicians, interviewers and field assistants were trained for these protocol for both animal and human surveillance.	
18	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	PREDICT staff trained in humane, safe and ethical animal handling during sample collection. PREDICT staff and partners trained in safe and ethical human subjects research.	
19	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	Ethical Review Committee (ERC) documents, approval for year-round human sampling and LBVD staff training on wildlife handling and sampling have been received and are maintained; P2 team received permissions from the key government partners (DMR and LBVD) for every surveillance. ERC extension with DMR was completed in May 2018, received approval until May 2019.	
20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			
21	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>

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22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for project personnel in environmental impacts and outbreak response in training materials.	All personnel associated with the project are trained to aware of sensitivity issues as well as environmental impacts and for outbreak response; The PREDICT team is a primary participant in developing outbreak response and guidance to high levels of the MOHS, as well as to EPT partners within the country (e.g. FAO, WHO, CDC); PREDICT additionally meets with other NGO's, officials from MONREC, MOLAI for trainings and guidance with the project and other One Health related work; With the coordination and leadership of LBVD, P2 team meet key partners from MONREC, Central Epidemiology Unit (Human outbreak response) and other EPI partners in quarterly partner meetings and other outbreak meetings as necessary.	Finalization of One Health Plan and Framework is in process with MOHS, MOLAI, and MONREC in participation with WHO, CDC, and FAO.
23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	Outbreak response guidance was orientated to National Outbreak Response team of Central Epidemiology Unit, MOHS. PREDICT staff have reviewed outbreak guidance.	Concept note for the training and collaboration for outbreak response was approved by MOHS.
24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	Guidelines have been provided and training conducted on the management and disposal of solid and medical waste for outbreak situations; personnel know to review protocols prior to handling materials; documentation of training and implementation is maintained.	Concept note for the training and collaboration for outbreak response was approved by MOHS.

	A	B	C	D
1	<b>PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report</b>			
2	<b>Country:</b>	NEPAL		
3	<b>Reporter:</b>	Chris Johnson (ckjohnson@ucdavis.edu); Kevin Gonzalez (kngonzalez@ucdavis.edu)		
4				
5	<b>IEE Activity 1: Procurement, storage, management, and disposal of public health commodities</b>			
6	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	<p><b>Laboratory: Complete</b> - MSDS sheets for chemical reagents are maintained as a hard copy in a master binder by the lab manager. Products are stored and disposed as per instruction of manufacturing companies. All staff have reviewed handling documents and product disposal trainings before handing products.</p> <p><b>Hospitals:</b> Hospital operates using the WHO guidelines, and clinic PREDICT staff trained on all appropriate PREDICT protocols, which are also available in hard copy.</p>	<p>Continuous addition of MSDS for new chemicals if obtained for lab work, such as Formalin and Trizol.</p> <p>Hospitals: MSDS and EGSSAA are being added to the PREDICT protocol safety binder at clinics.</p>
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	<p><b>Lab: Complete</b> - All lab staff received training on available PREDICT protocols.</p> <p><b>Field and Lab: Complete</b> - All concerned lab and field staff have received training on cold chain and supply chain to ensure proper collection, transport and storage of specimen and/or downstream products in PREDICT-2 protocols.</p> <p><b>Hospitals: Complete</b> - All PREDICT clinic staff are trained on cold chain and supply chain to ensure proper collection, transport and storage of specimens.</p>	<p>Training has been received by PREDICT staff in handling liquid nitrogen and operating -80°C freezer. Trainings have been conducted and documented for all relevant staff. All original, master documents are maintained locally with all PREDICT trainings reported to the central database. All trainings previously conducted to date on PREDICT-1 and PREDICT-2 protocols. Updated protocol training will be completed annually.</p>
9	1.3	Provide PREDICT, EGSSAA and WHO guidelines and conduct trainings on disposal of all public health commodities; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<p><b>Lab: Complete</b> - All relevant staff have received training on proper handling and disposal of healthcare generated wastes. All trainings previously conducted to date on PREDICT-2 protocols. A hardcopy manual is maintained by the lab.</p> <p><b>Field and Lab: Complete</b> - All staff are trained on universal safety precautions to eliminate or minimize exposure to potential hazards.</p> <p><b>Hospitals: Complete</b> - All staff are trained on universal safety precautions to eliminate or minimize exposure to potential hazards, and WHO guidelines for disposal of public health commodities practiced within hospitals.</p>	<p>Hospitals: EGSSAA added to the PREDICT protocol safety binder at clinics.</p>
10	<b>IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste</b>			
11	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>



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9	Nepal Health Research Council (NHRC) approval and guidelines are strictly followed.
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11	Remarks

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12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	<p><b>Lab: Complete</b> - Trainings have been conducted and documented for all relevant staff. A hardcopy manual is maintained by the lab for the biosafety precautions which includes the guidelines on proper handling and disposal of medical waste. All possible waste generated by the lab are categorized into: infectious, non-infectious recyclable, sharps and general wastes categories so as to ease all relevant staff in easy segregation and specific way of disposal.</p> <p><b>Hospitals: Complete</b> - Hospitals comply with the WHO guidelines for medical waste management and disposal. PREDICT hospital staffs are trained on proper handling and disposal of biological wastes. Appropriate safety protocol on waste management is incorporated in the PREDICT protocol safety binder at clinics.</p>	<p>Review of types of waste generated by lab is done periodically. Introduction of, or change, in any existing protocols are updated to ensure its proper way of disposal.</p> <p>Hospitals: EGSSAA to be added to the PREDICT protocol safety binder at clinics</p>
13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., <i>the E M&amp;M Tool - Action Plan</i> ).	<p><b>Lab: Complete</b> - A hardcopy manual has been maintained by the lab for the biosafety precautions which includes the guidelines on proper handling and disposal infectious wastes and highly hazardous wastes including biological specimen impregnated sharp wastes.</p> <p><b>Field and Lab: Complete</b> - All relevant PREDICT staff trainings have been conducted and documented prior to handling such wastes.</p> <p><b>Hospitals: Complete</b> - All relevant PREDICT staff trainings have been conducted and documented prior to project implementation and handling of such wastes.</p>	
14	2.3	Provide PREDICT and WHO guidelines and conduct trainings in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	<p><b>Lab: Complete</b> - PREDICT and WHO guidelines have been maintained in as a hardcopy document.</p> <p><b>Field and Lab: Complete</b> - Proper training as per the guidelines have been provided to all relevant PREDICT staffs including handling, management and disposal of hazardous or highly hazardous medical waste.</p> <p><b>Hospitals: Complete</b> - Appropriate training per the guidelines have been provided to PREDICT hospital staffs including handling, management and disposal of hazardous or highly hazardous medical waste. PREDICT guidelines for waste management during syndromic surveillance is provided in hardcopy.</p>	
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			

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16	Number	Mitigation Measures	Status of Mitigative Measures	List any outstanding issues relating to required conditions
17	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	<p><b>Field: Complete</b> - IACUC materials reviewed and ACU 101 training conducted for field staff. Conducted ethical training for implementation of human biological sampling and qualitative/quantitative data collection. Essential staff completed CITI's biomedical research training.</p> <p><b>Hospitals: Complete</b> - Ethical training conducted by a CITI certified instructor, and records maintained in an online database. A copy of the NHRC approval maintained at each hospital.</p>	
18	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	<p><b>Field: Complete</b> - IACUC materials reviewed and ACU 101 training conducted for field staff. Conducted ethical training for implementation of human biological sampling and qualitative/quantitative data collection. Essential staff completed CITI's biomedical research training.</p> <p><b>Hospitals: Complete</b> - Hospital staffs trained on ethical considerations, syndromic surveillance, human biological sampling, sample storage, packaging and shipping and outbreak response. Hard copy of PREDICT guidelines and protocols are maintained at the clinics.</p>	
19	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	<p><b>Complete</b> - Qualitative research and human biological surveillance approval received from NHRC and IRB, and conducted for assessment of risk factors associated with zoonotic disease transmission in Kathmandu due to human and animal contact.</p> <p><b>Hospitals: Complete</b> - Hospitals maintain national and institutional ethical permission documentation for human research.</p>	
20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			
21	Number	Mitigation Measures	Status of Mitigative Measures	List any outstanding issues relating to required conditions
22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for project personnel in environmental impacts and outbreak response in training materials.	<b>Ongoing</b> - meetings conducted with Ministry of Agriculture and Livestock Development, Ministry of Health, Ministry of Forest and Environment and other government agencies and NGOs, on all potential surveillance sites and sensitivities.	

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16	<b>Remarks</b>
	NHRC compliance committee conducted a successful series of reviews at both hospital sites to review sample collection/storage, ethical procedures and patient handing to ensure ethical compliance with the NHRC permissions and national policies.
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19	Ethical permission documentation for human research maintained locally in Nepal.
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21	<b>Remarks</b>
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23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	<p><b>Complete</b> - Surveillance and sampling sites shared with relevant in-country partners. Training and outbreak response ongoing with recently available PREDICT-2 outbreak assistance protocol.</p> <p><b>Hospitals: Complete</b> - Training exercises on outbreak response with all project staff.</p>	EGSSAA and Sphere Handbook guidelines made available for review.
24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<p><b>Complete</b> - Sphere Handbook and EGSSAA guidelines made available for review.</p> <p><b>Ongoing</b> - Outbreak assistance training complete as new PREDICT protocol has become available.</p>	<p>EGSSAA and Sphere Handbook guidelines made available for review.</p> <p>Hospitals: EGSSAA and sphere handbook guidelines to be made available in the binder.</p>

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23	Non-project staff participated in training on providing assistance during an outbreak to strengthen local response capacity.
24	Staff will follow guidelines and ensure training for management and disposal of solid and medical waste during outbreaks according to the procedures outlines in IEE activities 1 and 2 as in non-outbreak situations

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1	<b>PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report</b>			
2	<b>Country:</b>	REPUBLIC OF CONGO		
3	<b>Reporter:</b>	Cynthia Nkoua-Badzi [REDACTED] Anne Laudisoit (laudisoit@ecohealthalliance.org); William Karesh (karesh@ecohealthalliance.org)		
4				
5	<b>IEE Activity 1: Procurement, storage, management, and disposal of public health commodities</b>			
6	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	<b>Ongoing:</b> MSDS sheets are not yet completely available to all staff. Products are handled, stored and disposed without standards guidelines. PREDICT team members are encouraged to read carefully the recommendation sheets of each new material and reagent delivered before use it.	All trainings are up to date on current PREDICT protocols.
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	<b>Complete:</b> PREDICT trainings conducted and certified ; packing and shipping, cold chain and supply chain management as well as guidelines were provided. PREDICT uses liquid nitrogen dry-shippers for the field component and for transfer from the field to the laboratory. Predict members are trained and informed on the importance to maintain and respect Cold chain and EPI required when handling NH2I. One another workshop about the supply chain management and biosecurity have been carried out in 2018.	All trainings are up to date on current PREDICT protocols. An additional training on supply chain management would be useful.
9	1.3	Provide PREDICT and EGSSAA guidelines and conduct trainings on disposal of all public health commodities; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Complete :</b> PREDICT training conducted , certified and documented in handling of sharps, disposal of hazardous or highly hazardous medical waste; guidelines provided and in situ training too.	Some in country staff would need a refresher training about handling of sharps, disposal of hazardous or highly hazardous medical waste.
10	<b>IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste</b>			
11	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	<b>Incomplete :</b> PREDICT training conducted , certified and documented for medical waste disposal ; guidelines provided.	In each PREDICT site a trained person need to be identified to follow the appropriate WHO, EGSSAA guidelines and PREDICT SOPs on waste management and biosafety. A documentation system for storage and disposal of waste need to be achieved and shared.

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13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., <i>the E M&amp;M Tool - Action Plan</i> ).	<b>Complete</b> : PREDICT training conducted, certified and documented for handling of sharps and hazardous waste; guidelines provided and in situ training too ; waste eliminated according to PREDICT SOPs.	Working to establish a complete documentation system for storage and disposal of waste in all institutions involved in PREDICT activities.
14	2.3	Provide PREDICT, EGSSAA, and WHO guidelines and conduct trainings in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	<b>Complete</b> : PREDICT trainings conducted and documented for handling and disposal of waste; guidelines provided. LNSP has got an incinerator that allows destroying the infectious waste.	
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			
16	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
17	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	<b>Complete</b> : IACUC approvals and in-country animal sampling permissions received; field staff trained in ethical and safe sampling and animal handling protocols.	As there is no more wildlife sampling, PREDICT ROC does not need updating authorizations.
18	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	<b>Complete</b> : Guidelines provided; trainings in PREDICT protocol for safe animal capture, handling, and sampling , and for human sampling conducted, certified and documented.	
19	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	<b>Incomplete</b> : Qualitative Research IRB and in-country human subjects research permissions are to be renewed for the human behavioral data analysis.	Renewal or extension of authorizations are being processed.
20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			
21	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for project personnel in environmental impacts and outbreak response in training materials.	<b>Complete</b> - Workshop and simulation exercises have been conducted with stakeholders in case of outbreak to identify gaps in response system. PREDICT outbreak assistance and response capacity and emergency preparedness has been presented during trainings and workshops.	PREDICT have met Minister of Health and General Director of Military hospital, authorities in charge of environment, agriculture and forestry health issues in the country to discuss about outbreak planning.

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23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	<b>Complete</b> - Workshop and simulation exercise have been conducted. All staff recruited, staff from Molecular Biology Unit, staff from Ministry of livestock and some students have completed the training in PREDICT guidelines for outbreak assistance.	
24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	During PREDICT 2, training for management and disposal of solid and medical waste in outbreak situations was conducted; PREDICT guidelines only provided.	The training of the new staff on these protocols and guidelines will be scheduled

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1	<b>PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report</b>			
2	<b>Country:</b>	RWANDA		
3	<b>Reporter:</b>	Kirsten Gilardi (kvgilardi@ucdavis.edu)		
4				
5	<b>IEE Activity 1: Procurement, storage, management, and disposal of public health commodities</b>			
6	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	<b>Complete</b> - MSDS sheets have been reviewed by all relevant personnel; copies of all master documents are held in a master binder at PREDICT office and at the Rwanda Biomedical Center National Reference Laboratory (RBC/NRL); all trainings conducted to date on PREDICT-2 protocols.	Copies of MSDS sheets for new products will continue to be added.
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	<b>Complete</b> - Trainings conducted and documented for all staff; training documentation maintained locally and in central PREDICT training database; all trainings conducted to date on PREDICT-2 protocols; field cold chain equipment thoroughly inventoried and regularly inspected and maintained.	Trainings have been conducted and documented for all relevant staff. All original, master documents are maintained locally with all PREDICT trainings reported to the central database. All trainings previously conducted to date on PREDICT-1 and PREDICT-2 protocols. Updated protocol training will be completed as of November 2018.
9	1.3	Provide PREDICT and EGSSAA guidelines and conduct trainings on disposal of all public health commodities; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Complete</b> - Trainings have been conducted and documented for all relevant staff using the PREDICT-2 protocols; copies of all master documents are held in a master binder and all PREDICT trainings reported to the central database.	Trainings have been conducted and documented for all relevant staff. All original, master documents are maintained locally with all PREDICT trainings reported to the central database. All trainings previously conducted to date on PREDICT-1 and PREDICT-2 protocols. Updated protocol training will be completed as of November 2018.
10	<b>IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste</b>			
11	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	<b>Complete</b> - Trainings for storage and handling of medical waste have been conducted and documented for all relevant staff across sites; all original, master documents are maintained locally and all PREDICT trainings reported to the central database; all trainings conducted on PREDICT-2 protocols.	Trainings have been conducted and documented for all relevant staff. All original, master documents are maintained locally with all PREDICT trainings reported to the central database. All trainings previously conducted to date on PREDICT-1 and PREDICT-2 protocols. Updated protocol training will be completed when appropriate.

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13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., <i>the E M&amp;M Tool - Action Plan</i> ).	<b>Complete</b> - Trainings for handling sharps and medical waste disposal have been conducted and documented for all relevant staff; all original, master documents are maintained locally with all PREDICT trainings reported to the central database; E M&M Tool - Action Plan completed; all trainings conducted on PREDICT-2 protocols.	Trainings have been conducted and documented for all relevant staff. All original, master documents are maintained locally with all PREDICT trainings reported to the central database. All trainings previously conducted to date on PREDICT-1 and PREDICT-2 protocols. Updated protocol training will be completed when appropriate.
14	2.3	Provide PREDICT, EGSSAA, and WHO guidelines and conduct trainings in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	<b>Complete</b> - Trainings have been conducted and documented for all relevant staff, and guidelines have been provided; all original, master documents are maintained locally and all PREDICT trainings reported to the central database; all trainings conducted on PREDICT-2 protocols.	Trainings have been conducted and documented for all relevant staff. All original, master documents are maintained locally with all PREDICT trainings reported to the central database. All trainings previously conducted to date on PREDICT-1 and PREDICT-2 protocols. Updated protocol training will be completed when appropriate.
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			
16	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
17	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	<b>Complete</b> - Copies of IACUC protocols and Rwanda Development Board permission for animal sampling maintained and reviewed by all staff and relevant trainings conducted; IRB permission for human biological surveillance obtained from Rwanda Ethics Board and all associated trainings conducted; All original, master documents are maintained locally with all PREDICT trainings reported to the central database. Responding to all requests for data for compliance reporting.	Trainings will be conducted with all staff on any new protocols as these are made available; Continue to respond to all requests for data for IRB compliance reporting.
18	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	<b>Complete</b> - Copies of IACUC protocols and Rwanda Development Board permission for animal sampling maintained and reviewed by all staff and relevant trainings conducted; IRB permission for human biological surveillance obtained from Rwanda Ethics Board and all associated trainings conducted; All original, master documents are maintained locally with all PREDICT trainings reported to the central database. Responding to all requests for data for compliance reporting.	Trainings will be conducted with all staff on any new protocols as these are made available; Continue to respond to all requests for data for IRB compliance reporting.
19	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	<b>Complete</b> - Original copies of all required permits for animal and human sampling are maintained onsite with copies available for review.	
20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			

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21	Number	Mitigation Measures	Status of Mitigative Measures	List any outstanding issues relating to required conditions
22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for project personnel in environmental impacts and outbreak response in training materials.	<b>Ongoing</b> - Meetings held with Government of Rwanda's One Health Steering Committee; surveillance and sampling sites shared with all relevant in-country partners.	Trainings will be conducted with all staff on any new protocols as these are made available; PREDICT will address issues of sensitive species and habitats in event of project involvement in outbreak response activities with Ministry partners through the One Health Steering Committee as appropriate.
23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	<b>Complete</b> - Outbreak Assistance trainings have been conducted and documented for all relevant staff, and guidelines have been provided; all original, master documents are maintained locally and all PREDICT trainings reported to the central database; all trainings conducted on PREDICT-2 protocols.	Trainings conducted with all PREDICT staff on recently available Outbreak Assistance protocol.
24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Complete</b> - Outbreak Assistance trainings have been conducted and documented for all relevant staff, and guidelines have been provided; all original, master documents are maintained locally and all PREDICT trainings reported to the central database; all trainings conducted on PREDICT-2 protocols.	Trainings conducted with all PREDICT staff on PREDICT's Outbreak Assistance protocol.



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1	<b>PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report</b>			
2	<b>Country:</b>	SENEGAL		
3	<b>Reporter:</b>	Corina Monagin (cmonagin@ucdavis.edu); Jaber Belkhiria (jabelkhiria@ucdavis.edu)		
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5	<b>IEE Activity 1: Procurement, storage, management, and disposal of public health commodities</b>			
6	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	<b>PREDICT UCAD and ISRA Team</b> : Product MSDS sheets are available for the products we use for sampling and storage.	
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	<b>PREDICT ISRA and UCAD Team</b> : Personnel are receiving ongoing training on biosecurity and biosafety, cold chain and supply chain management using PREDICT protocols; training is documented (Certificates). Secure storage of samples is maintained at both labs.	
9	1.3	Provide PREDICT and EGSSAA guidelines and conduct trainings on disposal of all public health commodities; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>PREDICT ISRA and UCAD Team</b> : Training of field and laboratory personnel on biosafety and basic laboratory safety has been undertaken and documented (Certificates)	
10	<b>IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste</b>			
11	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	<b>PREDICT ISRA and UCAD Team</b> : Trainings for storage and handling of medical waste have been conducted and documented for personnel (Certificates ). in addition, the laboratory's biosafety manual describes the various steps from collection to disposal of medical waste. ISRA lab training other countries on waste disposal as well.	
13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., <i>the E M&amp;M Tool - Action Plan</i> ).	<b>PREDICT ISRA and UCAD Team</b> : Trainings have been conducted and documented for personnel. Master documents and guidelines have been made available to personnel; trainings are documented ( Certificates)	

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14	2.3	Provide PREDICT, EGSSAA, and WHO guidelines and conduct trainings in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	<b>PREDICT ISRA and UCAD Team</b> : Trainings have been conducted and documented for personnel using the protocols; guidelines provided for review; master have been made available to personnel; trainings are documented (Certificates )	
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			
16	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
17	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	<b>PREDICT ISRA and UCAD Team</b> :The approved country specific IRB has been reviewed by UC Davis Institutional Review Board and approval was received. UCAD IRB Renewal not needed as Y5 activities focus on community engagement. Renewal of in country animal sampling permits not needed as surveillance activities have ended. All trainings completed and updated as needed with certificates on file.	
18	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	<b>PREDICT ISRA and UCAD Team</b> : Master guidelines and protocols provided; relevant trainings conducted and documented for personnel (Certificates)	
19	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	<b>UCAD Team</b> :IRB approval for human biological surveillance obtained and documented.	
20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			
21	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>

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22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for project personnel in environmental impacts and outbreak response in training materials.	<b>Centre des Operations d'Urgence Sanitaria (COUS), Direction des Parcs Nationaux (DPN) , Ministere de l'Environnement et du Developement Durable (MEDD) are active partners in wildlife surveillance activities (currently focusing on community engagement); upon invitation (and approval) to support outbreak response activities, meetings to be held with local environmental experts, NGO's, and ministry officials as appropriate. PREDICT will address issues of sensitive species and habitats in the event of project involvement in outbreak response activities with Ministry partners as appropriate. PREDICT continues to train Government partners on all aspects related to One Health Surveillance activities including outbreak response.</b>	
23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	<b>COUS, DSV and PDN Ongoing</b> - Personnel are engaged in ongoing training on protocols for outbreak response including EISMV Masters students.	
24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>PREDICT (ISRA, UCAD), COUS DSV and PDN Ongoing</b> - Guidelines made available for review; personnel are undergoing training on protocols for outbreak response.	Personnel will follow guidelines and ensure training for management and disposal of solid and medical waste during outbreaks according to the procedures outlined in IEE Activities 1 and 2 as in non-outbreak situations.

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1	<b>PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report</b>			
2	<b>Country:</b>	SIERRA LEONE		
3	<b>Reporter:</b>	James Bangura ( )		
4				
5	<b>IEE Activity 1: Procurement, storage, management, and disposal of public health commodities</b>			
6	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	<b>Complete:</b> MSDS maintained and available for review by staff; products stored and disposed of according to appropriate guidelines.	Pending: Refresher trainings to be conducted and documented for all relevant staff. All original, master documents are maintained locally with all PREDICT trainings reported to the central database. All trainings previously conducted to date on PREDICT-1 and PREDICT-2 protocols. Updated protocol training will be completed when appropriate.
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	<b>Complete:</b> Guidelines provided; refresher training in PREDICT protocols for cold chain and supply chain management to be conducted and documented in the central database.	Pending: refresher trainings to be conducted and documented for all relevant staff. All original, master documents are maintained locally with all PREDICT previous trainings reported to the central database. All trainings previously conducted to date on PREDICT-2 protocols. Updated protocol training will be completed when appropriate.
9	1.3	Provide PREDICT and EGSSAA guidelines and conduct trainings on disposal of all public health commodities; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Complete:</b> Guidelines provided; training in PREDICT protocols for disposal of public health commodities conducted and documented in EIDITH and country specific training log Maintained.	Pending: Refresher Trainings to be conducted and documented for all relevant staff. All original, master documents are maintained locally with all PREDICT trainings reported to the central database. All trainings previously conducted to date on PREDICT-2 protocols. Updated protocol training will be completed when appropriate.
10	<b>IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste</b>			
11	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	<b>Complete:</b> Guidelines provided for waste storage and disposal; training in PREDICT protocols conducted and documented in central database; medical waste stored and disposed of according to appropriate guidelines. Waste disposal Log maintained	Refresher Trainings to be conducted and documented for all relevant staff. All original, master documents are maintained locally with all PREDICT trainings reported to the central database. All trainings previously conducted to date on PREDICT-1 and PREDICT-2 protocols. Updated protocol training will be completed when appropriate.

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13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., the E M&M Tool - Action Plan).	<b>Complete:</b> Guidelines provided for handling sharps and hazardous waste; training in PREDICT protocols conducted and documented in central database; hazardous medical waste stored and disposed of according to appropriate guidelines; EM&M Tool - Action Plan completed.	Pending refresher trainings for facilities staff in the sites we maintain and will be documented for all relevant staff. All original, master documents are maintained locally with all PREDICT trainings reported to the central database. All trainings previously conducted to date on PREDICT-1 and PREDICT-2 protocols. Updated protocol training will be completed when appropriate.
14	2.3	Provide PREDICT, EGSSAA, and WHO guidelines and conduct trainings in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	<b>In Progress:</b> Guidelines provided for handling sharps and hazardous waste; training in PREDICT protocols conducted and documented in central database; hazardous medical waste stored and disposed of according to appropriate guidelines. Log book maintained by team for routine hazardous waste disposal.	None
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			
16	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
17	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	<b>Complete:</b> IACUC 101 and PREDICT training on ethical and safe animal handling and sampling protocols conducted and documented in central database. IRB protocol for human surveillance reviewed by country level ethical approval received.	Approved; renewal upcoming: IRB protocol for human behavior surveillance to be renewed in January 2019
18	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	<b>Complete:</b> Humane, ethical and safe animal capture, handling and sampling training conducted and documented using PREDICT protocols.	Sierra Leone is apart of the Ebola Host Project and no human sampling to be done.
19	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	<b>Complete:</b> All permits for animal capture, handling and sampling have been obtained and are maintained on site in-country.	Sierra Leone is apart of the Ebola Host Project and no human sampling to be done.
20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			
21	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for project personnel in environmental impacts and outbreak response in training materials.	<b>In Progress:</b> Discussion in progress with the environmental division, Outbreak response guidelines trainings conducted and documented in the central database.	Pending: Consideration for sensitivity training not yet addressed in preparation for a potential outbreak situation. Discussions ongoing.

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22	PREDICT will address issues of sensitive species and habitats in event of project involvement in outbreak response activities with ministry partners as appropriate.

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23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	<b>Complete:</b> PREDICT outbreak assistance protocol training conducted and documented in central database.	Pending: refresher trainings will be conducted with all staff on any new Outbreak Assistance protocols as these are made available.
24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Complete:</b> Guidelines provided, reviewed by project staff; training on PREDICT protocols for management and disposal of solid and medical waste and outbreak response conducted and documented in central database.	Pending: refresher training through the document for staff in the coming months.

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1	<b>PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report</b>			
2	<b>Country:</b>	TANZANIA		
3	<b>Reporter:</b>	David Wolking (djwolking@ucdavis.edu); Jennie Lane (jklane@ucdavis.edu)		
4				
5	<b>IEE Activity 1: Procurement, storage, management, and disposal of public health commodities</b>			
6	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	<b>Complete:</b> All sites (SUA and IHI) store and dispose off products according to manufacturer's MSDS instructions. Product disposal trainings have been conducted but not documented for each individual. Copies of product MSDS sheets reviewed and kept in binders at each site.	Trainings have been conducted and documented for all relevant staff(SUA and IHI). All original, master documents are maintained locally with all PREDICT trainings reported to the central database. All trainings previously conducted to date on PREDICT-1 and PREDICT-2 protocols. Updated protocol training will be completed when appropriate.
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	<b>Complete:</b> All sites trainings conducted and documented for all staff in PREDICT central database. Copies of master training documents held in a master binder at the Iringa field station, SUA Lab and IHI _Bagamoyo lab .	Trainings have been conducted and documented for all relevant staff. All original, master documents are maintained locally with all PREDICT trainings reported to the central database. All trainings previously conducted to date on PREDICT-1 and PREDICT-2 protocols. Updated protocol training will be completed when appropriate.
9	1.3	Provide PREDICT and EGSSAA guidelines and conduct trainings on disposal of all public health commodities; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Complete:</b> All sites trained on disposal of waste for all relevant staff at each site. Copies of all protocols for disposal of waste are kept in a binder at each site (SUA Lab and IHI _Bagamoyo lab and field sites).	Trainings have been conducted and documented for all relevant staff. All original, master documents are maintained locally with all PREDICT trainings reported to the central database. All trainings previously conducted to date on PREDICT-1 and PREDICT-2 protocols. Updated protocol training will be completed when appropriate.
10	<b>IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste</b>			
11	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	<b>Complete:</b> All sites have been trained on disposal of waste for all relevant staff at each site. Copies of all protocols for disposal of waste are kept in a binder at each site (SUA, Field site, IHI)	Trainings have been conducted and documented for all relevant staff. All original, master documents are maintained locally with all PREDICT trainings reported to the central database. All trainings previously conducted to date on PREDICT-1 and PREDICT-2 protocols. Updated protocol training will be completed when appropriate.

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6	<b>Remarks</b>
7	To follow up and ensure training and documentation annually.
8	To follow up and ensure copies of training completion are placed in binders and database updated accordingly
9	To follow up and ensure training and documentation annually.
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11	<b>Remarks</b>
12	To follow up and ensure training and documentation annually.

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13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., <i>the E M&amp;M Tool - Action Plan</i> ).	<b>Complete:</b> Trainings have been conducted for all relevant staff. All original, master training documents are maintained locally with all PREDICT trainings reported to the central database. The Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., the E M&M Tool - Action Plan) completed for SUA and IHI labs.	Will document completion of trainings and personnel review of protocols annually and document training report in binder kept at each site.
14	2.3	Provide PREDICT, EGSSAA, and WHO guidelines and conduct trainings in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	<b>Complete:</b> All sites - Trainings have been conducted for all relevant staff (SUA, IHI and field site). The original, master training documents are maintained locally with all PREDICT trainings reported to the central database.	Will document completion of trainings and personnel review of protocols on annual basis in binder kept locally at each site.
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			
16	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
17	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	Copies of IACUC protocols and local permission for animal sampling maintained and reviewed by all staff and relevant trainings conducted (IACUC, safe sampling and animal handling). All original IACUC master documents are maintained locally (Iringa field station) with all PREDICT trainings reported to the central database. All original IACUC master documents are maintained locally (Iringa field station) with all PREDICT trainings reported to the central database IHI Bagamoyo- IRB and human subjects research permissions is approved by US UCD and IHI IRB and National ethical board Tanzania, and regularly renewed. Training related research ethics staff has been completed. Related training documentation are kept locally in binder.	
18	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	<b>Ongoing:</b> SUA- Original copies of all required permits for animal sampling are maintained onsite with copies available for review. Permissions are in place for testing of animal samples. Export permits to reference labs is obtained when needed for both labs. IHI- Copies of IRB approvals for human subjects research permissions maintained in binder on site.	

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13	To follow up and ensure training and documentation annually.
14	To follow up and ensure training and documentation annually.
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19	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	<b>Ongoing:</b> SUA- Original copies of all required permits for animal sampling are maintained onsite with copies available for review. Permissions in place for testing of animal samples including export permissions to reference labs. IHI- Copies of IRB approvals for human subjects research permissions maintained in binder on site.	
20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			
21	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for project personnel in environmental impacts and outbreak response in training materials.	<b>Ongoing:</b> All sites to conduct meetings with local environmental experts, NGO's and ministry officials to discuss outbreak planning with regards to sensitive species and habitats in the region.	PREDICT will address issues of sensitive species and habitats in event of project involvement in outbreak response activities with Ministry partners as appropriate.
23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	<b>Complete:</b> All personnel have been trained on PREDICT outbreak assistance using new protocols.	Trainings have been conducted and documented for all relevant staff. All original, master documents are maintained locally with all PREDICT trainings reported to the central database. All trainings previously conducted to date on PREDICT-1 and PREDICT-2 protocols. Updated protocol training will be completed when appropriate.
24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Complete:</b> All trainings have been conducted and documentation maintained locally in binders with PREDICT trainings also reported to the central database. Both site obtained the sphere handbook from <a href="http://www.sphereproject.org/sphere/en/handbook/revision-sphere-handbook/draft-ready-for-feedback/">http://www.sphereproject.org/sphere/en/handbook/revision-sphere-handbook/draft-ready-for-feedback/</a>	



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21	<b>Remarks</b>
22	Trainings on PREDICT outbreak assistance protocol complete and will be documented annually
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1	PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report			
2	Country:	THAILAND		
3	Reporter:	Kevin Olival (olival@ecohealthalliance.org); Alice Latinne (latinne@ecohealthalliance.org)		
4	Chula lab: WHO Collaborating Centre for Research and Training on Viral Zoonoses, Faculty of Medicine, Chulalongkorn University			
5	IEE Activity 1: Procurement, storage, management, and disposal of public health commodities			
6	Number	Mitigation Measures	Status of Mitigative Measures	List any outstanding issues relating to required conditions
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	Complete - MSDS sheets have been reviewed and signed by all relevant personnel; product disposal trainings have been conducted and documented; copies of all master documents are held in a master binder.	
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	Complete - Trainings conducted and documented for all staff; in-field cold chain equipment was inspected.	Trainings have been conducted and documented for all relevant staff. All original, master documents are maintained locally with all PREDICT trainings reported to the central database. All trainings previously conducted to date on PREDICT-1 and PREDICT-2 protocols.
9	1.3	Provide PREDICT and EGSSAA guidelines and conduct trainings on disposal of all public health commodities; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	Complete - Trainings have been conducted and documented for all relevant staff. All original, master documents are maintained locally with all PREDICT trainings reported to the central database. All trainings previously conducted to date on PREDICT-1 and PREDICT-2 protocols.	
10	IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste			
11	Number	Mitigation Measures	Status of Mitigative Measures	List any outstanding issues relating to required conditions
12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	Complete - Documentation provided and trainings conducted and documented for all relevant staff.	
13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., the E M&M Tool - Action Plan).	Complete - Guidelines provided and trainings conducted and documented for all relevant staff; E M&M Tool - Action Plan completed.	

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6	<b>Remarks</b>
7	Annual refresher training for Basic Laboratory Safety conducted for all staff.
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13	Biosafety Level 3 and personal protective equipment (PPE) training conducted for all staff, May 2016

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14	2.3	Provide PREDICT, EGSSAA, and WHO guidelines and conduct trainings in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	<b>Complete</b> - Guidelines provided and trainings conducted and documented for all relevant staff.	
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			
16	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
17	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	<b>Complete</b> - Copies of IACUC protocols, IBC protocols and local permissions for animal sampling and human IRB maintained and reviewed by all staff and relevant trainings conducted; all original, master documents are maintained locally with all PREDICT trainings reported to the central database.	
18	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	<b>Complete</b> - Copies of PREDICT guidelines and protocols maintained and reviewed by all staff and relevant trainings conducted; all original, master documents are maintained locally with all PREDICT trainings reported to the central database.	
19	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	<b>Complete</b> - Original copies of all required permits for animal and human sampling are maintained onsite with copies available for review; permissions in place for testing of animal samples including export permissions to reference labs.	
20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			
21	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for project personnel in environmental impacts and outbreak response in training materials.	<b>Complete</b> - Discussions held with the local provincial health officers with regards to the surveillance sites and interfaces targeted for sampling for humans and animals; upon invitation to support outbreak response activities, meetings to be held with local environmental experts, NGO's, and ministry officials as appropriate.	
23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	<b>Complete</b> - All lab personnel trained in relevant protocols with trainings reported to central database.	

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22	Shared PREDICT guiding principles during outbreaks with government outbreak contacts.
23	PREDICT is not directly engaged in outbreak response activities in Thailand but provides support to the country and region for lab testing and diagnostics.

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24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Complete</b> - all lab personnel trained in relevant protocols with trainings reported to central database; EGSSAA and Sphere Handbook guidelines made available for review.	

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1	<b>PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report</b>			
2	<b>Country:</b>	UGANDA		
3	<b>Reporter:</b>	Kirsten Gilardi (kvgilardi@ucdavis.edu)		
4				
5	<b>IEE Activity 1: Procurement, storage, management, and disposal of public health commodities</b>			
6	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	<b>Complete</b> - MSDS sheets have been reviewed by all relevant personnel; copies of all master documents are held in a master binder at PREDICT office and at Uganda Virus Research Institute (UVRI) Laboratory; all trainings conducted to date on PREDICT-2 protocols.	Copies of MSDS sheets for new products will continue to be added; and all trainings of relevant personnel on any new protocols will be conducted as these are made available.
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	<b>Complete</b> - Trainings conducted and documented for all staff; training documentation maintained locally and in central PREDICT training database; all trainings conducted to date on PREDICT-2 protocols; field cold chain equipment thoroughly inventoried and regularly inspected and maintained.	Trainings will be conducted with all staff on any new protocols as these are made available.
9	1.3	Provide PREDICT and EGSSAA guidelines and conduct trainings on disposal of all public health commodities; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Complete</b> - Trainings have been conducted and documented for all relevant staff using the PREDICT-2 protocols; copies of all master documents are held in a master binder and all PREDICT trainings reported to the central database.	Trainings will be conducted with all staff on any new protocols as these are made available.
10	<b>IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste</b>			
11	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	<b>Ongoing</b> - Trainings for storage and handling of medical waste have been conducted and documented for all relevant staff across all sites including at Uganda Virus Research Institute (UVRI); all original, master documents are maintained locally and all PREDICT trainings reported to the central database; all trainings conducted on PREDICT-2 protocols.	Trainings will be conducted with all staff on any new protocols as these are made available.
13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., <i>the E M&amp;M Tool - Action Plan</i> ).	<b>Ongoing</b> - Trainings for handling sharps and medical waste disposal have been conducted and documented for all relevant staff across all sites including UVRI; all original, master documents are maintained locally with all PREDICT trainings reported to the central database; E M&M Tool - Action Plan completed; all trainings conducted on PREDICT-2 protocols.	Trainings will be conducted with all staff on any new protocols as these are made available.

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14	2.3	Provide PREDICT, EGSSAA, and WHO guidelines and conduct trainings in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	<b>Ongoing</b> - Trainings have been conducted and documented for all relevant staff across all sites including UVRI, and guidelines have been provided; all original, master documents are maintained locally and all PREDICT trainings reported to the central database; all trainings conducted on PREDICT-2 protocols.	Trainings will be conducted with all staff on any new protocols as these are made available .
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			
16	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
17	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	<b>Complete</b> - Copies of IACUC protocols and Uganda Wildlife Authority permission for animal sampling maintained and reviewed by all staff and relevant trainings conducted; IRB permission for human biological surveillance obtained from Uganda National Council for Science & Technology and all associated trainings conducted; All original, master documents are maintained locally with all PREDICT trainings reported to the central database. Responding to all requests for data for compliance reporting.	Trainings will be conducted with all staff on any new protocols as these are made available.
18	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	<b>Complete</b> - Copies of IACUC protocols and Uganda Wildlife Authority permission for animal sampling maintained and reviewed by all staff and relevant trainings conducted; IRB permission for human biological surveillance obtained from Uganda National Council for Science & Technology and all associated trainings conducted; All original, master documents are maintained locally with all PREDICT trainings reported to the central database. Responding to all requests for data for compliance reporting.	Trainings will be conducted with all staff on any new protocols as these are made available.
19	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	<b>Complete</b> - Original copies of all required permits for animal and human sampling are maintained onsite with copies available for review.	
20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			
21	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for project personnel in environmental impacts and outbreak response in training materials.	<b>Ongoing</b> - Meetings held regularly with the Uganda National Task Force for Outbreak Preparedness and Response; surveillance and sampling sites shared with all relevant in-country partners.	Trainings will be conducted with all staff on any new protocols as these are made available; PREDICT will address issues of sensitive species and habitats in event of project involvement in outbreak response activities with Ministry partners through the National One Health Platform as appropriate.

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23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	<b>Complete</b> - Outbreak Assistance trainings have been conducted and documented for all relevant staff, and guidelines have been provided; all original, master documents are maintained locally and all PREDICT trainings reported to the central database; all trainings conducted on PREDICT-2 protocols.	Trainings will be conducted with all staff on any new Outbreak Assistance protocols as these are made available.
24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Complete</b> - Outbreak Assistance trainings have been conducted and documented for all relevant staff, and guidelines have been provided; all original, master documents are maintained locally and all PREDICT trainings reported to the central database; all trainings conducted on PREDICT-2 protocols.	Trainings will be conducted with all staff on any new Outbreak Assistance protocols as these are made available.

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1	<b>PREDICT 2: Year 4 Environmental Mitigation and Monitoring Report</b>			
2	<b>Country:</b>	VIET NAM		
3	<b>Reporter:</b>	Amanda Fine ( ); Sarah Olson ( )		
4	<b>*Labs: refers to the Regional Animal Health Office No. 6 (RAHO6), Viet Nam National University of Agriculture (VNUA) and the PREDICT-2 add National Institute of Hygiene and Epidemiology (NIHE) unless otherwise noted in remarks</b>			
5	<b>IEE Activity 1: Procurement, storage, management, and disposal of public health commodities</b>			
6	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
7	1.1	Provide and maintain product MSDS sheets and ensure products are stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling materials.	<b>Labs: Complete</b> - PREDICT-2 refresher trainings on appropriate protocols and the MSDS sheet were provided to lab personnel and reviewed following standard regulations <b>Field site: Complete</b> - conducted refresher trainings of appropriate protocols and documented training data	All products stored according to OIE guidelines
8	1.2	Provide PREDICT guidelines and conduct trainings on cold chain and supply chain management and provide documentation that all recommended measures are implemented.	<b>All sites: Complete</b> - trainings have been conducted and documented for all staffs participating in sample collection and diagnostic activities	Assessment of completeness of training on-going as new personnel join lab or field team
9	1.3	Provide PREDICT and EGSSAA guidelines and conduct trainings on disposal of all public health commodities; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>All sites: Complete</b> - trainings have been conducted and documented for all staff for handling and disposal of public health waste in the field and lab	
10	<b>IEE Activity 2: Generation, storage, handling, and disposal of hazardous or highly hazardous medical waste</b>			
11	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
12	2.1	Provide and maintain documentation that all medical waste is stored and disposed of according to manufacturer guidelines or in compliance with all WHO, EGSSAA, and PREDICT guidelines as appropriate; ensure personnel have reviewed protocols prior to handling medical waste.	<b>All sites: Complete</b> - Provided protocols of PREDICT-2 and relevant trainings on handling of medical waste to all staff and documented these trainings	Labs: Continuing to make sure documentation certifying that all personnel have reviewed safety guidelines and protocols on an annual basis and is available for inspection
13	2.2	Provide PREDICT guidelines to all facilities and conduct trainings for all implementing personnel in handling of sharps and in the generation and disposal of hazardous or highly hazardous medical waste and provide documentation that all recommended measures are implemented; complete the Healthcare Waste Management Minimum Program Checklist and Action Plan annually (e.g., the E M&M Tool - Action Plan).	<b>Lab site: Ongoing</b> - Training has been conducted for all staffs; skills assessment is on-going <b>Field site: Complete</b> - PREDICT-2 protocols and corresponding training have been provided to staffs	Continuing to work with partners to make sure documentation is up-to-date and available for inspection

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4	ditional human health laboratory of the
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6	Remarks
7	MSDS sheets available for all products used by P-1 and P-2
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9	RAHOs, VNUA and NIHE are following different national and international guidelines but adapt with any new and different regulations in PREDICT protocols
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11	Remarks
12	Biohazardous waste bags are not available locally; interim supplies being provided from US partners with need to order more to meet upcoming field and lab needs
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14	2.3	Provide PREDICT, EGSSAA, and WHO guidelines and conduct trainings in handling of sharps, and in the generation and disposal of hazardous or highly hazardous medical waste; assure personnel have reviewed protocols prior to handling and disposing of materials; provide documentation of trainings and implementation of guidelines.	<b>All sites: Complete</b> - PREDICT-2 protocols and corresponding training have been provided to staffs	Continual follow-up needed to ensure documentation or certification of completion of trainings and annual review of safety guidelines are available.
15	<b>IEE Activity 3: Establishing animal and human viral surveillance capacity in selected countries and regions</b>			
16	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
17	3.1	Provide compliance with approved PREDICT and UC Davis Institute for Animal Care and Use Committee (IACUC) and Institutional Review Board (IRB) protocols; as well as country-level ethical approvals; provide and maintain documentation that all appropriate project personnel have received IRB and IACUC 101 training and training in PREDICT ethical and safe sampling and animal handling protocols.	<b>All sites: Complete</b> - IACUC and permission for animal sample collection have been provided and reviewed by all staffs; appropriated trainings implemented; master documents are maintained in-country and training reports have been recorded in the project data system. Master IRB has been reviewed and local IRB was approved.	
18	3.2	Provide PREDICT guidelines and protocols and conduct trainings in humane, ethical, and biologically safe human sampling and animal capture, handling, and sample acquisition.	<b>All sites: Complete</b> - Training have been conducted with all PREDICT guidelines and protocols to all partners. Training reports have been maintained locally and upload to the project data system	
19	3.3	Provide and maintain documentation of all country specific permissions for conduct of human sampling and animal capture, handling, and sample acquisition.	<b>All sites: Complete</b> - All permission for human and animal sample collection are maintained in both original and scan copies onsite	The IRB for doing qualitative research is renewed annually
20	<b>IEE Activity 4: Outbreak response planning and implementation</b>			
21	<b>Number</b>	<b>Mitigation Measures</b>	<b>Status of Mitigative Measures</b>	<b>List any outstanding issues relating to required conditions</b>
22	4.1	Meet with local environmental experts, officials, NGOs, and the MEO and discuss outbreak planning with regards to sensitive species and habitats in the region; include sensitivity training for project personnel in environmental impacts and outbreak response in training materials.	<b>All sites: Complete</b> - Shared surveillance and sampling sites with relevant human and animal health management and rescue centers in term of outbreak preparedness and response, and risk assessment. Trainings of outbreak response guide have been conducted with appropriate staffs	PREDICT will address issues of sensitive species and habitats in event of project involvement in outbreak response activities with Ministry partners as appropriate.
23	4.2	Provide trainings for staff and ensure personnel have reviewed protocols prior to outbreak responses.	<b>Field site: Complete</b> - Provided outbreak assistance protocol and corresponding training to all PREDICT staffs	Trainings will be conducted with all staff on any new Outbreak Assistance protocols as these are made available.

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16	<b>Remarks</b>
17	IRB and human subjects research permissions was approved by local governments
18	IRB and human subjects research permissions was approved by local governments
19	IRB and human subjects research permissions was approved by local governments
20	
21	<b>Remarks</b>
22	
23	

	A	B	C	D
24	4.3	Provide PREDICT, EGSSAA, and Sphere Handbook guidelines and conduct trainings on management and disposal of solid and medical waste in outbreak situations; ensure personnel have reviewed protocols prior to handling materials; provide documentation of trainings and implementation of guidelines.	<b>Field site: Complete</b> - Provided outbreak assistance protocol and corresponding training to all PREDICT staffs	Additional partners in outbreak investigations need to be trained if relevant



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24	All partners have to follow different national and/or international guidelines when outbreaks occur